

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 20, 1880.

ORIGINAL LECTURES.

CLINICAL LECTURE.

A SKETCH OF A CASE OF PROBABLE REMITTENT FEVER WITH CEREBRAL SYMPTOMS, WITH POST-MORTEM EXAMINATION.

Delivered at the Philadelphia Hospital

BY EDWARD T. BRUEN, M.D.,

One of the Physicians to the Hospital, and Demonstrator of Clinical Medicine in the University of Pennsylvania, etc.

GENTLEMEN,—Last year, about this time, I presented for your study some cases of anasarca which developed as the sequence of deficient vaso-motor tonus. I endeavored to prove that the action of the malarial toxæmia was sufficient to suspend the action of the nervous system governing arterial tension, and to bring about increased exudation from the blood-vessels, and diminished absorption. I also showed you that the secretion of sweat was not alone dependent on the blood-supply of the cutaneous vessels, but is also under the control of the innervation of nerves supplying the cutaneous glands, and that a suppression of the functional activity of the skin was also a possible factor in malarial anasarca or effusion into pleural sacs. These cases and my arguments in support of my position can be found in the *Philadelphia Medical Times* for December 21, 1879, in the Proceedings of the County Medical Society. To-day I wish you to note a case in which the malarial poison has expended its force upon the cerebral nervous system.

Morris F., æt. 36, has been for two years a servant in the house of the superintendent of this hospital, and enjoyed excellent health. During the first two weeks of October of this year he complained of malaria, but did not give up his occupation. On the 17th he was found in his bed, in the morning, delirious, and the temperature, as taken by his physician, was 103° F.; in the evening it was 101°. The 18th, A.M., temperature was 105°; in the evening 101°. The 19th it was 104° in the morning; in the evening 104½°. I saw him at noon of the 19th. His mental state resembled that of acute mania. He was singing, talking rapidly, shouting, and

the attendants could scarcely restrain him in bed. The pupils responded to light; no local nerve-paralysis, but there was a clonic spasm of right arm, with a tendency to flex the fingers of the right hand and retain them clenched, and he would beat his breast with this arm, while the other limbs were motionless. A spasm of the muscles of the throat rendered swallowing impossible. Wednesday, the 20th, the temperature fell to 98° F., without treatment except a bath of 95° F., given the day before to equalize circulation and favor heat-evolution. In the evening the temperature rose to 102° F. Subsequently the record was as follows: 21st, A.M., 101½°; P.M., 102°. 22d, A.M., 102½°; P.M., 104½°. 23d, A.M., 102°; P.M., 103°. 24th, A.M., 101½°; P.M., 102°. 25th, A.M., 100°; P.M., 101°. 26th, A.M., 99½°; P.M., 98½°. Death occurred suddenly on the morning of the 27th.

Many of you saw this case during its progress in the wards. For the benefit of all, let me sketch the salient features of the case. These represent our patient as somewhat rational on the morning of the 20th, sufficiently so to give some account of his personal history, although he was by no means thoroughly rational. The difficulty of deglutition and spasm of the throat-muscle were on this day recognized as hysteroid in type, for nourishment could be swallowed when food was finally offered to him.

In the evening of that day the delirium returned, and he never afterwards regained consciousness. His mental state became comatose towards the last, although at intervals, when aroused, he would converse incoherently in German, French, or English. Three days before death a paresis of the left buccinator muscle was noted; the cheek on this side seemed to flap loosely inward. He would always show signs of pain if the right arm was lifted or moved, the fingers of the hand were always tightly flexed, the thumb turned inward, though the clonic spasm ceased nearly a week before death. The special senses of sight and hearing were always intact. The urine dribbled involuntarily, and yet the bladder was at times much distended, and the catheter had to be used. There was evidence of some cystitis, with a small amount of albumen and some pus in the urine. The respirations were always about

thirty-two per minute, rather shallow, and for three days before death snoring; the pulse always indicative of arterial fulness, and most of the time the heart acted strongly, though the first few days of the attack the beats were weak. For several days there was bilious diarrhoea, and a large bed-sore formed on the back. There was noticeable increase of splenic dulness.

The diagnosis, the non-effect of treatment, and the post-mortem are points of exceeding interest. The suggestions which entered my mind were, Is this a case of cerebral syphilis? Is it an abrupt development of typhoid fever after two weeks' incubation? Is it a pernicious form of malarial remittent fever? Is it a case of acute specific meningitis, or rapid development of syphilitic disease of blood-vessels or connective tissue in the nervous system? Cases of delirium considered to be of this nature have been reported, and cases not unlike that of our patient.*

The deficiency of pronounced localized symptoms, especially loss of function (paralysis), militated against this view, and yet the clonic spasm of the right arm, the clenched fingers, the pain on moving the right arm, the paresis of the buccinator muscle, had to be accorded their importance. I think no symptom of specific disease of the nervous system is more characteristic than a localized loss or perversion of functional activity, when this is not the direct result of obvious pressure or injury of nerves. Irregular paralysis of limbs on different sides of the body, for example, is characteristic, or even diminished functional activity. The suddenness of the onset favored this view; but when three days had elapsed and still no localized symptoms developed, this suggestion was positively discarded.

The temperature chart afforded the strongest argument against typhoid fever. It was not an ascending scale of higher evening temperature, nor was the elevation a sustained elevation. The most probable hypothesis seemed to be a malarial remittent fever, to which the temperature, the bilious diarrhoea, the slight splenic enlargement, the locality in which the patient lived (notoriously malarial), and the season of the year, seemed to point. Moreover, cases of this kind have come under

my notice once or twice. One of the most remarkable was one in which similar symptoms had occurred in a gentleman of gouty diathesis, together with delirium. Much the same series of symptoms were present, only the delirium was less violent. Here, with much persuasion, the regular medical attendant was induced to give forty grains of quinine for two days, and a prompt recovery from all the symptoms ensued. Now note the effect of treatment in our case. As there was scanty evidence of remission, thirty grains of quinine were given in solution on the afternoon of the 20th; the morning of the 21st the temperature was not materially affected; for three days the same amount of quinine was given daily during the apparent remission, with similar results. The drug seemed to reduce the temperature but very slightly, but there was no general improvement in the symptoms. On the 24th and 26th twenty-five grains of quinine were given, and a notable reduction of temperature occurred, but death took place suddenly on the forenoon of the 27th. Small doses of calomel, also cream of tartar, were used occasionally. Counter-irritation to head and neck by means of blisters, and internally bromide of potassium, were all means which were efficiently used. Nourishment was supplied by the rectum and by the mouth, but without avail.

The post-mortem was made six hours after death, by Dr. Formad, microscopist to the hospital, and myself. The brain was examined minutely, and was found to be singularly free from morbid process. There was a slightly oedematous condition of the arachnoid, but not so much as was noted in a case of cancer of the liver, without cerebral symptoms, which was examined at the same time. The liver was natural in size and appearance, macroscopically and microscopically; the spleen was enlarged, weighed sixteen ounces, and was much congested. There was an old cystitis and pyelitis, which accounted satisfactorily for the small amount of albumen and pus in the urine. The cortical and medullary portions of the kidney were healthy, and microscopic study of these organs showed healthy tubules, with slight cloudy swelling of the epithelium. I mention this for your especial attention, as some idea that the symptoms indicated a uræmic condition may have suggested itself to some of you. Note that

* See A Contribution to our Knowledge of Syphilitic Diseases of the Nervous System, by Dr. H. C. Wood, American Journal of the Medical Sciences, October, 1880.



the respirations were thirty-two, the pupils were neither contracted nor dilated, the skin was moist, frequently the urine passed abundantly, and approximate estimation showed the amount of urea normal. These points always excluded uræmia.

To return to the autopsy, a solitary tuberculous ulcer was found in the ileum, probably from absorption of pus from the kidney. Lungs and heart were normal, save that old pleural adhesions were extensive.

Does it not appear that the vital powers had been reduced by the cystitis, and that the system was unable to rally under the malarial toxæmia? It is rare to note so pronounced and persistent brain-symptoms in malarial fever in this latitude: though frequent in Southern climates, here we do not look for them.

I have often seen somewhat similar cerebral symptoms in the course of cases of chronic alcoholism. Frequently have I felt inclined to diagnose meningitis, but have refrained on the grounds already stated. The teachings of this case can, however, be applied to many a clinical picture. I have thought the case might be valuable in teaching caution in making a diagnosis of cerebral irritation or inflammation. I would advise you never to commit yourself to a diagnosis of meningitis without first being satisfied that local symptoms exist; and, in view of the rarity of simple meningitis, remember to inquire for evidence of the prior existence of syphilis.

ORIGINAL COMMUNICATIONS.

HEMORRHAGE INCIDENT TO PARTURITION.

*Read before the Philadelphia County Medical Society,
October 13, 1880.*

BY GEORGE HAMILTON, M.D.

Nontoward event so often attends labor as post-partum hemorrhage, nor does any other condition so frequently occasion anxiety and alarm in the accoucheur. The profuseness and celerity of the discharge will, in many cases, quickly reduce the woman to a condition that affords small hope of escape from the impending danger; and fortunate is he who, in a long practice, has not been compelled to witness his patient sinking quietly away, or frantic from an icy coldness that has seized upon every limb, or writhing in convul-

sion that has no end but in death. The tragic termination, fortunately, does not often occur; yet it not unfrequently happens that the physician is filled with solicitude as, from time to time, on examining the pulse, scarcely perceptible, beating sometimes very slowly, oftener very rapidly, he observes the blanched face, the pinched features, the increasing coldness of the extremities, with the distressing and irrepressible yawning and jactitation that usually attend such conditions. Yet even under these discouraging circumstances a majority of women, either from great tenacity of the vital principle, or by a prompt and judicious application of remedial measures, will escape a fatal issue.

That a condition so dangerous, or it may be fatal, and in character so well adapted to excite profound sympathy, in the fact that she who has just ushered an infant into life is now threatened with the loss of her own, should have engaged from time immemorial the thoughts and the pens of so many practitioners, is no matter for surprise. Yet, despite all that has been done with a view to the prevention or arrest of post-partum hemorrhage, it still remains the most prominent of the dangers incident to parturition. In this point of view it is most gratifying to observe that, for a short time past, renewed efforts in this direction have been, and are now, in progress for the discovery of some agent or measures more reliable than any heretofore devised to avert the dangers alluded to. In this connection we cannot but commend the action of Prof. Penrose in bringing before the Gynæcological Association, when last in session in this city, the subject of uterine hemorrhage. And, however we may be disposed to hesitate in adopting one or two of the measures proposed for the suppression of hemorrhage without a more extended trial being accorded them, it must still be admitted that the subject, involving as it does the lives of so many individuals, has a supreme importance, exceeding perhaps, with one possible exception, that of all others discussed in that session. In a paper read some time ago before the Philadelphia County Medical Society, by Dr. Charles T. Hunter, upon the use of hot water for the suppression of hemorrhage in surgical practice, allusion was incidentally made by the lecturer to the practice, lately recommended, of injecting the uterus with warm, or even

hot, water in case of post-partum hemorrhage. Bold, or even hazardous, as this procedure might at first view be regarded, cases are cited where the discharge was apparently by this means moderated or promptly arrested. More than forty years ago, through the medium of a nurse, I was told of a country physician who, when the usual treatment failed to arrest the hemorrhage, applied a folded napkin, heated nearly to scorching, over the region of the uterus, with the immediate cessation of the flow as the result, and this he declared was his uniform practice in similar cases. Where heat is applied to the cutaneous surface of such temperature as to cause the sensation of burning, a shivering or decided chill would, especially after cold applications, be likely to occur, just as we observe in cases of severe burning or scalding. The shock to the nervous system in this event is so powerful as nearly always to paralyze, to a considerable degree, the action of the heart and vascular system, as is made manifest by the state of the pulse in all similar conditions, whatever may be the cause. Whether one or the other of these methods of applying heat may be safely and advantageously employed for the suppression of hemorrhage must, of course, be determined by far more numerous trials than have hitherto been made.

The primary object of this paper is not, however, to enter upon the general subject of uterine hemorrhage, but to present for consideration a few thoughts regarding certain embarrassments sometimes encountered in the treatment of post-partum hemorrhage. This, as every practitioner will sooner or later discover, may be moderate and last a considerable time, yet without seriously endangering the life of the woman; whilst, on the other hand, it may be, as before said, fearfully profuse and rapid, destroying the patient in a very short time, or rendering her situation so critical that the accoucheur must remain for hours in anxious suspense, not exempt, perhaps, from sad forebodings that the apartment in which his patient lies is destined soon to become the chamber of death. A case in illustration was Mrs. B—, residing within one square of my present residence, to whom I was urgently called. She was about three weeks short of the full term, and, while seated at the supper-table, without pain or other premonition, she suddenly arose, rushed up-

stairs, and threw herself upon a bed. On ascending the stairs I noticed a good deal of blood upon them, and a deluge of blood had already escaped from the woman, passed through the bed and bedding, and lay in large amount upon the floor. The face of the woman was blanched, the pulse exceedingly frequent and feeble. On inquiry it appeared that in four or five other confinements nothing untoward had occurred. Slight pains began directly after she reached the bed; the os uteri was found to be already considerably dilated and relaxed. Cold applications, stimulus, and ergot were resorted to. The pains quickly increased, and in a short time the child was born, without apparent characteristic action of the ergot. The flow of blood after pain began, and until the child was born, was very slight, yet in such a case it was of serious importance; and, to add to the difficulty, the placenta was partially adherent, the uterus had not contracted, despite repeated doses of ergot, and occasional slight discharges continued. Believing that, unless the placenta was removed by the hand and the contraction of the uterus thereby effected, the woman must perish, that process was resorted to, and accomplished without difficulty. Yet, notwithstanding the facility of passing the hand into the womb, owing to the unusual relaxation of the parts, increased doubtless by the exhausted condition of the system, she resisted, as nearly always happens in such cases, and the consequence was, not a great, but a decided increase of the flow, though only for a moment or two. From this time the patient began to sink more rapidly; the limbs, especially the feet, legs, and knees, became intensely cold, so that she screamed with agony and violently upbraided two persons engaged actively in rubbing her limbs with heated cloths, and so continued to do until a short time before her departure.

Another case of somewhat similar character came under my care in the country. It was the second accouchement of a pale, anæmic young woman, residing about six miles from my location, and about the same distance from West Chester. The summons came at midnight, and the journey required about an hour. On entering the chamber, a woman in attendance said the child had been born an hour and a half before; that the labor was easy and of short duration, but that in a few moments after the birth

the woman had swooned, and with only partial returns of animation had so continued; and, furthermore, the after-birth had not come away. On examination, an amount of blood was seen to have passed from the uterus which, although not large for a strong woman, was sufficient to account for the prostrate condition of this patient. My presence and questions partly aroused the patient, and in whispers she said that very slight pains were felt from time to time, and a slight discharge followed each pain, but that the greatest loss of blood took place immediately after the birth of the child. The usual measures were at once adopted,—cold applications, stimulants, and ergot. As often happens after the child has passed from the uterus, the ergot failed to act, and, seeing no alternative other than to remove, if possible, the placenta, previously ascertained to be adherent, the hand was with some difficulty introduced, but failed to effect the purpose intended. The muscular resistance of the woman to this manual operation was so strong that, for the moment, an increased discharge occurred. After some delay and giving more stimulus she was induced to submit to another attempt to remove the placenta, but, partly in consequence of the strength of the adhesion, and partly from the embarrassment occasioned by her resistance, the effort again proved abortive. From this time the aspect of the case became more discouraging: her husband was therefore directed to mount a horse and summon, with all haste, Dr. Worthington or Dr. Thomas from West Chester; but before he was prepared to start, so sudden and decided a change took place as to manifest clearly that, if once upon the road, he would never again behold his companion alive. His departure was therefore countermanded, that he might be present to witness the last moments of his expiring wife, whose existence terminated in less than half an hour after he re-entered his humble dwelling.

These cases represent, probably, a majority of those which, under similar circumstances, terminate fatally. In the example first quoted, it was but a very few minutes from the moment the woman left the tea-table until I saw her, yet she was then nearly exhausted. In the second case the principal hemorrhage took place immediately after the birth of the child: so that both women were rendered nearly

exsanguineous in a very short time; yet, had there been no further loss of blood, it is almost certain that both would have escaped with their lives. This, however, could scarcely be expected, for under the most favorable aspect of such conditions there will be more or less discharge; and the important question here presents, whether the manipulations resorted to were not contributing agencies to the loss of life. In reference to even slight discharges of blood after profuse hemorrhages, they must be regarded in the most serious light, and, in view of the wonderful conservative and recuperative power of the vital principle, it may well be asked, How far should the accoucheur go under the contingencies involved, and when should he avoid or desist from processes which occasion only in very small degree a further loss of blood?—for we are here to remember that it was the last pound that broke the camel's back. That the determination of a question of such gravity and importance should have so often been attempted in earlier and recent times without decided success is not surprising; nor, in fact, need we wonder at the variety or antagonism of opinions upon this subject, involved as it is in difficulties and contingencies of no ordinary character. In the cases and under the conditions presented, a large majority of practitioners would at the present day resort to an active mode of treatment, for this is in accord with the current teaching; and again, many might not, in case they anticipated the loss of the patient, be willing that she should depart otherwise than *secundum artem*; whilst a smaller number, more conservative in medical thought and practice, might, under similar conditions, prefer that her departure should be *secundum naturam*. To attempt to define the precise line of conduct to pursue in the emergency referred to, or to declare what should and what should not be done in the critical conditions in view, is not only impracticable but would be hazardous; for, however similar the general conditions of a large majority of such cases may appear, there will of necessity be modifying circumstances, and unless these be rightly and promptly appreciated we incur the risk of endangering the slight hold upon life the woman yet retains; for it is beyond question that in the crises alluded to the loss or the preservation of a few ounces

of blood may decide the fate of the patient. In view, then, of the danger the parturient woman is so often exposed to from hemorrhage, it is the duty of the practitioner faithfully to record every circumstance, however minute, occurring in the dangerous, but more especially in the fatal, cases he may have had in charge; for it is not by theory, but by gathering together and collating a numerous series of well-established facts regarding this subject, that a more successful mode of treatment can be arrived at.

In this connection reference may here be made to the actual doctrine and practice in regard to the delivery of the placenta in ordinary labor. As a rule, it is now recommended that little if any delay should be permitted before proceeding actively to the removal of the after-birth, so as to afford opportunity for contraction of the uterus, which, as is commonly said, cannot take place while the placenta remains undelivered, and the woman is thereby exposed to the danger of hemorrhage. The rule of action, and the propositions here announced, may be accepted in general terms; yet this mode of treatment, and the propositions on which it is founded, will very often be at fault, and do not accord with the views or experience of the most eminent authorities of earlier times. In my own experience it has very often happened that the placenta has remained in an uncontracted uterus many hours—on one occasion for thirty-six hours—without injurious result; and in not a few cases, where the placenta, either spontaneously or by active interference, was expelled promptly after the birth, the flow of blood still continued until the patient was greatly exhausted, and in these cases it is probable the blood issued from one or more vessels of preternatural size. In regard to the relaxation and rising of the uterus after it has contracted well, we have not, as a rule, observed much increase in the flow, especially if the previous discharge has been moderate; where the reverse has occurred, it has nearly always been in women of a constitutional predisposition to hemorrhage. In every instance where the uterus rises towards the abdominal region a careful local examination should be made, and attention given to the pulse, to ascertain whether the case is one of concealed hemorrhage or one of mere relaxation.

When called, for the first time, to a

woman in labor, it is best, in order to prepare for an emergency, to inquire whether, in previous labors, she habitually or occasionally suffered from great loss of blood; and whether this had occurred before or directly after the expulsion of the placenta or, again, as may happen, not until an hour or two afterwards: in the latter case the accoucheur should remain at least a corresponding length of time, that prompt aid may be given if required. The difference between women, in regard to their ability to support great loss of blood, varies immensely, and cannot always be determined by the ordinary external signs of fulness of blood and strength. In the earlier days of my practice in the country (and those were the days of venesection), when the city physician often, and the country physician always, had to perform the operation, it frequently happened that the robust, ruddy-faced farmer or laborer would show symptoms of faintness before ten ounces of blood had been drawn, whilst a meagre-looking, pale-faced man or woman would bear the loss of fourteen to sixteen ounces without inconvenience. The same thing occurs in obstetric practice: so that the hemorrhage which would endanger or destroy the life of one woman might be borne perfectly well by another of no apparent greater physical strength.

ANTHRACÆMIA—WOOL-SORTER'S DISEASE.

Read before the Philadelphia County Medical Society, October 13, 1880,

BY WILLIAM R. D. BLACKWOOD, M.D.,
Attending Physician to St. Mary's Hospital.

FOR several years past the attention of our professional friends in England has been attracted to a serious form of sickness prevailing to a considerable degree among operatives employed in woollen-mills, the study of which has notably been made a point by Dr. Bell and gentlemen practising near Bradford. Some months ago a committee was appointed by the Medico-Chirurgical Society of that city to investigate the matter, and recently four typical cases have been reported in which the result of post-mortem examination leaves no room seemingly for doubt as to the existence of this peculiar affection, and that in all probability it is due to blood-poisoning by the so-called *Bacillus anthracis*, a low form of bacteria, pre-

sumably contaminating the wool, and which gains entrance to the blood of those affected through the likeliest channels,—the lungs or stomach. Wool from which yarn of varying character is made, and which is used in whole or in part in the production of a long line of textile fabrics, is gathered from the ends of the earth, and when received is frequently very dirty, the Continental grades being especially impure. The ordinary method of sheep-washing previous to shearing is more of a habit than a success, and consequently, before the process of manufacture into yarn, wool has to be thoroughly scoured after reception at the mills, either by hand or by machinery. The impurities found in the fleece consist largely of earthy or vegetable matter, depending on the nature of the pasturage and shelter of the flock; but there is also at times animal matter,—the “tick,” for example,—with scales or scabs from the epidermis of the sheep, together with more or less oily material. Diseased sheep or goats may be rejected as unfit for food, but the wool or hair is all the same secured for market. Now, before scouring the wool is “sorted” into long or short fibre, fine or coarse, etc., quality of stock determining largely the ultimate product. This is done by hand in well-lighted rooms which are kept at a high temperature, especially in the cooler months, and it is here that the majority of cases of anthracæmia originate; but some have happened in operatives exposed only in departments after the material has been scoured, in which condition it is usually clean and white. A much better method is being tried, by which before sorting the wool is treated with benzine, which not only cleans it of dirt but also must destroy all bacteria. The caution requisite in this process and the high insurance unfortunately operate against the plan, but time and necessity will doubtless remedy these disadvantages.

The symptoms so far recognized are violent cephalalgia, often unilateral, fever intensifying in its progress, severe pleuritic pain, crepitant inspiratory rales, and finally free diarrhoea. The differential diagnosis between anthracæmia and typhoid fever is clear, and ordinary care only is requisite to distinguish them. Cases have been complicated with malignant pustule from inoculation by scratching pimples or abrasions, especially about the face, and in

such instances the neighboring lymphatics have become greatly enlarged. The prognosis is bad, and treatment is, as yet, apparently unsettled.

Post-mortem investigation shows softening of the bronchial glands and large accumulation of fluid in the pleural cavity particularly, but also in the abdominal. The intestines, beyond injection and low inflammatory signs, give no evidence. The glands of Peyer are not softened or ulcerated. *Bacillus* is abundant in the fluids of the closed cavities, in the viscera, and in the blood. Inoculation of blood containing this form of bacteria in the lower animals, as tested in the mouse, rabbit, and guinea-pig, produces the disease, death supervening in from thirty-six to seventy-two hours. Decomposition is rapid, especially at the site of puncture in the case of inoculation.

My attention was called to this subject from having during the summer treated two obscure cases of illness in wool-sorters resembling very much the affection described, and which, though they recovered, induce me to refer to them with a view to further investigation by gentlemen of the Society who may have an interest in the subject. Their sickness was precisely as above described. The period of incubation, so far as known, was about ten days, the acute duration two weeks, and as much more time for convalescence was required. The treatment was expectant,—large doses of cinchonidia sulphate for the bronchial disorder; opium and carbolio acid for the diarrhoea; tincture of iodine painted externally for the pleuritic pain. There was no tendency to a relapse. Another patient (a driver), who handled bales of wool continually, succumbed after leaving my care from what was certified as phthisis, but which very likely was anthracæmia. Under the circumstances, I was debarred from suggesting a post-mortem. Through the courtesy of my brother, Mr. James D. Blackwood, who is engaged in the manufacture of woollen and worsted yarn, I have examined a great variety of wool, domestic and imported, and also the residue left after scouring. The high temperature and caustic soaps and alkalies employed in washing destroy all traces of bacteria, if they exist in the wool before undergoing that process, and, although cold water in which wool has been thoroughly soaked frequently contains

these organisms, I am not yet satisfied as to the origin of them, neither have I been able to obtain accurate information as to the *Bacillus anthracis* other than from allusions to it in the English medical journals, but I hope to be better posted shortly through friends who are interested in the subject in England. I learn from my brother that, aside from domestic supply in our city, foreign wool is imported only of English growth and from Australia, all of which being comparatively clean may account for the non-appearance of anthracæmia in this country as yet. The supply from Persia, Algiers, and Barbary is exceedingly foul, but to his knowledge is unknown in America, although large quantities of these grades are handled abroad. In view, however, of the extent and increasing business in woollen production in this country, and the probable development of this disease as a sequence through a greater demand for foreign material, it becomes our duty and our interest to unravel any entanglement which may confound anthracæmia with obscure disorders in those exposed thereto, and isolate this intruder if it be an entity, in preference to looking upon anomalous diseases in these people as hybrid,—a condition which I for one do not believe exists in pathology.

246 NORTH TWENTIETH STREET.

A SPORADIC CASE OF HOSPITAL GANGRENE.

BY J. H. POOLEY, M.D.,

Lecturer on Surgery in the Columbus (Ohio) Medical College.

AUGUST 12, 1880, I was asked by Dr. A. Schueller to see in consultation with him F. B., a boy aged 10 years, who a short time before had received an injury from the wheel of a street-car passing over his right foot; and as the injury was a severe one, and the case involved grave responsibility, the doctor was good enough to ask my co-operation in the treatment, so that I had the opportunity of carefully observing it throughout.

The wound, which was a deep and much lacerated one, passed along the inner border of the foot from the toes to the heel, almost in a straight line. The skin and soft parts generally were extensively dissected from the sole of the foot, and the metatarsal bones comminuted to some extent. About the ankle the integument was superficially torn, and turned back to the extent of about two inches; the

joint was entirely uninjured. There was but little hemorrhage. After careful examination, an attempt to save the foot was deemed feasible. The wound was carefully cleansed, some loose pieces of bone removed, and the edges brought together loosely by a few points of interrupted suture. To forestall inflammation, we made use of Petigaud's mediate irrigation, by means of the india-rubber coil, through which cool water was passed, the foot being protected from too great an impression of cold by means of a roller bandage. All went on very well at first; inflammation was kept down, and the patient had little pain. After three or four days, however, it was evident that considerable sloughing was going on; the apparatus was removed, and warm lotions of carbolic acid were substituted, to favor the separation of the sloughs. But the gangrene spread, not only in the deeper portions of the wound, where it had the ordinary appearance of mortification after injury, but also in that superficial wound over the ankle, already alluded to, where it had the appearance of hospital gangrene, a thing I had not seen since our late war, now sixteen years ago.

The surface was covered over with a light-grayish, tenacious, greasy-looking deposit, which could not be washed or wiped away. The edges were thickened, infiltrated, and somewhat everted. The boy had a good deal of pain, at times very severe. The pulse was frequent, 120; there was irregular fever, with profuse perspiration and utter loss of appetite; tongue much furred; obstinate constipation.

It was now pretty evident that the attempt to save the foot would be useless, if not hazardous, and with the concurrence of Dr. Wirth, who was called in consultation, the leg was amputated a short distance above the ankle, by the circular method, on Saturday, August 21.

The next morning I found the stump painful, swollen, the edges everted and pouting between the sutures, and covered with a whitish-gray film of exudation. The discharge was thin, ichorous, rather free, and of a peculiar, penetrating odor. The boy had had a bad night, and his condition was the same as before the operation.

The stitches were removed, and the whole interior seen to be covered with the partly whitish exudation already described. Strong carbolic acid lotion was applied to the stump, the interior of which was syringed out with the same.

Quinine, iron, and stimulants, which the patient had already been ordered, were continued.

The gangrene continued for several days, the exudation appearing to increase in density, and numerous sloughs of connective tissue came away. The skin remained unimplicated throughout. A strong alcoholic lotion, with carbolic acid, was now ordered, and almost

at once a change for the better was discernible; healthy granulations began to spring up; the remaining sloughs were cast off, and in a week we were able to begin to close the stump with adhesive straps, and it healed very rapidly, together with which the general health of the patient improved, so that in three weeks he was able to go out.

The disease of which this is a sporadic example is very rarely seen except in an epidemic or endemic form, so that I have thought it well worthy of record and preservation.

The name hospital gangrene, by which it is best known, is certainly inapplicable to such a case, nor is it easy to find in its somewhat extensive synonymy a designation that is perfectly unexceptionable. It has been called *gangræna contagiosa*, *phagedæna gangrænosa*, *gangræna nosocomialis*, putrid ulcer, pulpy gangrene, *pourriture d'hôpital*, hospital brand, putrid degeneration, traumatic typhus, and diphtheria of wounds.

Of these names the most misleading is sloughing phagedæna, as I believe it to be entirely distinct from phagedæna, though resembling it in some of its features. The term diphtheria of wounds is also objectionable, as tending to confound this disease with another well-known constitutional affection. It is, however, a favorite designation with the Germans, and by them is often very loosely applied. Hospital gangrene in its epidemic forms is both infectious and contagious: whether in our case it was so or not, fortunately there were no means of deciding. It has been said that sporadic cases are owing to some peculiar defect of constitution in the patient, but, so far as we can tell, this boy was in perfect health at the time of his injury; and also that they are more apt to occur during the prevalence of erysipelas, scarlatina, diphtheria, etc., but, so far as I know, no disease of the kind was prevailing here at the time.

That this was really a case of hospital gangrene seems evident, I think, from the following considerations: the suddenness with which it made its appearance in the stump after amputation; the operation was done through healthy tissue, so that, although there was purulent infiltration just below, the fine, healthy appearance of the muscles at the point of amputation was a matter of remark to us at the time. And yet the next morning, less than twenty-four hours afterwards, we find the disease

fully set in in the stump. This is very characteristic, and, together with the peculiar deposit alluded to, and the general *ensemble* of symptoms, settles the diagnosis. The case was indeed very mild, far different from the terrific and rapidly-destructive course of the epidemic form; but this mildness of sporadic cases has before been commented on.

The peculiar diphtheroid deposit of this disease bears, after all, but a feeble resemblance to that of true diphtheria, lacking altogether its thickness, tenacity, and capability of being detached in plates or extensive pieces.

It consists, according to Dr. W. Thomson, who examined it microscopically, mainly of fluid granular matter and débris; no evidence of textural growth was found in it, and no organisms. According to Professor Joseph Jones, and some German observers, both animal and vegetable organisms have been found, but there is no sufficient reason for believing that they have any causal relations to the disease. To illustrate the rarity of sporadic hospital gangrene, I have collected the following statements from various writers, which I present with the remark that the majority of the authorities examined say nothing about it.

Agnew says (*Surgery*, vol. i. p. 139), "It may prevail in two forms, the endemic and the sporadic. In the second, the disease appears to be confined to isolated cases and sores of a specific nature, as chancre and open cancer" (which is true of phagedæna, but not of hospital gangrene, properly so called). Spence speaks of it (*Lectures*, vol. i. p. 68) as gray pul-taceous phagedæna, and says, "Occasionally we meet with sporadic cases, depending either on some unhealthy tendency in the individual, want of cleanliness, or from improper, irritating dressings having been used, most likely from a combination of all these conditions; but by far the largest number and best-marked cases arise either from endemic or epidemic influences." Miller says (*Principles of Surgery*, p. 345), "It seems to have been known and described by the old writers, as Aetius, Paulus, and Avicenna, but was not noticed prominently and distinctly until the end of the last century and beginning of the present." He makes no reference to its sporadic occurrence. Erichsen (*Surgery*, vol. i. p. 580) says it is rarely met with in its fullest

extent, except in military practice, and makes no mention of sporadic cases. Gant says (*Surgery*, p. 216), "Hospital gangrene is fortunately known to but few surgeons in civil practice now living; and we must refer to those of the past for information." Bryant says (*Surgery*, p. 436), "In its sporadic form it seems especially to affect the subjects of septic or pyemic disease, and perhaps the existence of certain conditions of the secretions inclined to coagulation may favor its production." Ashurst says (*Surgery*, p. 392), "This affection is occasionally met with as a sporadic disease, but has attracted most attention when prevailing epidemically or endemically in hospitals, especially when large numbers of wounded men are crowded together, as in military hospitals in the neighborhood of a battle-field." Fergusson says (*Practical Surgery*, p. 99), "Such a disease as that once familiarly known under the name of hospital gangrene is now rarely seen, although from time to time, both in hospitals and in private, cases are met with which resemble in many respects those of former years."

THE MODE OF PRODUCTION OF ARTERIAL HYPERTROPHY AND ATHEROMA IN BRIGHT'S DISEASE AND ALLIED CONDITIONS.

BY JOHN S. WOODSIDE, M.D.,

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I HAVE had the subject-matter of this paper under consideration for the past year, while studying Bright's disease as it occurs among the insane, and have arrived at conclusions in regard to the production of the hypertrophy similar to those advocated by Da Costa and Longstreth in their valuable and original investigations into the "state of the ganglionic centres in Bright's disease."*

It is for the purpose of supporting their views, and of further disseminating and elucidating the subject, that the following remarks are offered. They "point out the causal relations which they believe the muscular hypertrophy of the vessels has to the alterations found in the ganglia," and they arrive at two chief factors of irritation which bring about the hypertrophy:

First, that "the cause may be of such a

nature that it operates through the general nervous system, for it is a well-ascertained fact that grief and sorrow and nervous depression are potent sources of Bright's disease, especially of the contracting kidney." Enough stress has not been laid on the frequency, extent, and etiological power of this psychological irritation. It is corroborated and beautifully exemplified among the insane, particularly in chronic cases. Out of about fifty autopsies made at this asylum during the past two years, only three or four had what would be pronounced healthy kidneys. The arterial changes, however, were always well marked, even when but a slight amount of renal disease was present. In going through the wards of any asylum, it is interesting to note how many of the cases present the full, tense pulse, giving that peculiar resistance to the finger which indicates thickening of the arterial coats and general vascular changes.

Secondly, "the disturbance may come through the blood, for the nutrient fluid supplying the renal plexus, if altered, will produce a condition of irritation of the ganglionic cells, with subsequent tissue-changes alike in the ganglia and in the kidneys, and give rise to the phenomena of intestinal nephritis,—hyperplasia of the connective tissue and hypertrophy of the vessels." (Da Costa and Longstreth.)

Dr. George Johnston, who was the first to elucidate, and who continues to defend, the fact that cardiac and arterial hypertrophy invariably follow chronic kidney disease, explains the mode of its production by reflex action, and likens the "excessive arterial contraction excited by an abnormal quality of blood, as analogous to spasm of the glottis provoked by an irritating gas or foreign body in the larynx." This is not a good parallelism, however, as the reflex is undoubtedly through the sympathetic, and, like all sympathetic reflexes, slow and persistent in character, and unlike the quick, transient cerebro-spinal reflex exhibited by the glottis.

The character of the sympathetic reflex is best exemplified by the movements of the pupil. In going from darkness to a brilliantly-lighted room, it is some time before the irritation carried by the optics to the corpora quadrigemina, and reflected along the oculo-motorius to the ophthalmic ganglion, and thence by the ciliary nerves

* American Journal of the Medical Sciences, July, 1880.

to produce the requisite contraction of the pupil, takes place; but when the contraction is complete, *it remains so until the provoking stimulus is removed.* So it is with the arterial reflex which I am about to describe.

Gull and Sutton deny the hypertrophy of the muscular coat, and describe a condition of the vessels which they designate "arterio-capillary fibrosis," and express their belief that the "cardio-vascular changes and renal degeneration are the result of this morbid state, which is allied to senile degeneration," considering Johnston's hypertrophy "a hyalin-fibroid change."* The weight of further investigation goes to support Johnston's observations in the main, yet undoubtedly demonstrating secondary changes in the surrounding connective tissues.

The following I take to be Da Costa and Longstreth's theory, *in extenso*, which harmonizes the above facts, and renders clear the sequence of events which commences with blood-deterioration and winds up with vascular transformations and connective-tissue degenerations.

The action of the intracardial ganglia and the intestinal gangliated plexuses of Auerbach and Meissner is now well understood. Vulpian, Hénocque, Klebs, and Arnold agree in the following analogous mode of termination of the vasomotor nerves in the arteries: a fundamental plexus distributed outside the external tunic; an intermediate plexus situated in the external tunic, and composed of filaments from the fundamental plexus; an intermuscular plexus, excessively delicate, which comes from the intermediate plexus, and which terminates in punctiform enlargements, sometimes in the nucleus, sometimes in the fibre, and sometimes in the interstices between the fibre-cells. Small ganglia are found on all of these plexuses, particularly at the bifurcations and points of anastomosis, and, also, nodular enlargements are found in the course of the finest filaments.

The efferent fibres of these minute ganglia which are distributed to the intima, being irritated by the passing impurities, carry an excessive amount of stimulation to the ganglia just described, which causes them to evolve and transmit an excessive amount of nervous energy by their efferent

fibres to the muscular coat, causing a *persistent* contraction and consequent obstruction of the blood-current; this in turn calls forth increased cardiac action with its resultant hypertrophy. The irritation continuing, contraction is sustained, giving rise to the arterial hypertrophy, and interfering with the blood-supply of the vasa vasorum to the intima, which consequently undergoes fatty degeneration or atheroma. This, in turn, spreading from the larger arteries to the arterioles, and finally to the capillaries, interferes with the normal supply of nutriment to the tissues, as well as with the reception of the waste nitrogenous matters. This condition continuing for weeks and months leaves the body cachectic, and a fit nidus for general somatic degenerations, which are most likely to occur in the connective-tissue elements. The irritated ganglia undergo granular degeneration, with hyperplasia of their connective tissue.

GLYCYRRHIZA AS A CORRIGENT.

BY E. T. BLACKWELL, M.D.

THE taste of common liquorice is very agreeable to a considerable portion of the human race. The stick is greedily devoured by children, while the juice in many countries is a favorite drink. Its quality of correcting unpleasant medicines has been utilized somewhat, but its usefulness in this particular may be greatly extended. The fluid extract masks so completely the cinchona salts as to render them acceptable to children and other persons of fastidious taste. A very limited amount of acid only is allowable to facilitate the solution of the salt, as any excess precipitates the glycyrrhizin. Made carefully and lightly shaken, it forms a very good mixture.

The fluid extract may be included in a multitude of combinations, embracing solutions of morphine and chloral, as also diarrhoeal and cough mixtures, tonics, etc.

An example or two may suffice:

R Ext. rhamni purshianæ fl.,
Ext. glycyrrhizæ fl., aa ʒij;
Aq., ʒj.—M.

S.—A teaspoonful to be given at night, to be repeated p. r. n.

R Chloralis, ʒss;
Ext. glycyrrhizæ fl., ʒij;
Aq., ʒiss.—M.

* See Transactions of the London Pathological Society.

S.—Give a teaspoonful, and repeat p. r. n.

A remedy of extended popularity is the pulvis glycyrrhizæ compositus of the Prussian Pharmacopœia. The formula is exhibited to show the proportion of each ingredient in a teaspoonful, the usual dose prescribed:

Pulv. Glycyrrhizæ Comp., Pr.

	In each teaspoonful.
R Glycyrrhizæ pulv.,	6 grains;
Sennæ pulv., aa ʒj,	6 “
Sulphur. loti,	3 “
Fœniculi pulv., aa ʒss,	3 “
Sacchari albi, ʒiij,	18 “

M.

Amount, 36 grains,—containing 9 grains of laxative and 27 grains of excipient, a proportion of 1 to 3.

This prescription is faulty not only in that it is weak in laxative power, but because of the very great amount of sugar, which increases fermentation in sour stomachs, rendering it very objectionable in many cases. Its form is inexact, because an article affecting the combination as a corrigent is taken from its legitimate place, at the foot of the formula, and placed at its head. That it should give name to the medicine is absurd, for the same reason.

The British form, which omits the sulphur and fennel, perpetuates the misnomer, notwithstanding it degrades the naming article from the head of the recipe, which is here displayed for the reason already given:

Pulv. Glycyrrhizæ Comp., Br.

	In each teaspoonful.
R Sennæ pulv.,	8 grains;
Glycyrrhizæ pulv., aa ʒij,	8 “
Sacch. alb., ʒvj,	24 “

M.

Whole amount, 40 grains,—laxative matter 8 grains, excipient 32 grains, or a proportion of 1 to 4.

The following scheme, in which the remedial drugs occupy the leading place and the corrigents and demulcents their appropriate relation and amount, I propose, with the name of pulvis sennæ compositus, as a substitute for the forementioned. The benefit of alliteration is used to aid the memory:

	In each teaspoonful.
R Sennæ pulv.,	8 grains;
Sulphur. loti,	8 “
Sacchari albi, aa ʒss,	8 “
Fœniculi pulv.,	4 “
Glycyrrhizæ pulv., aa ʒij,	4 “

M.

In all, 32 grains,—laxative 16 grains, excipient 16 grains,—an equal proportion.

No one will question, I think, the improvement in bringing the quantity of sulphur to equal that of the senna, which it so much surpasses as a laxative. Nor does it prove less acceptable to the taste, while it is better tolerated by the stomach.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINICAL SERVICE OF R. J. LEVIS, M.D.

Reported by CHAS. H. WILLITS, M.D.

NOTES OF A CASE OF TRAUMATIC HERNIA THROUGH THE DIAPHRAGM—CASE OF FRACTURE OF VERTEBRÆ, WITH TREATMENT AND GENERAL REMARKS.

GENTLEMEN,—The following history, kindly furnished by Dr. Croll, resident surgeon, is one of great interest and rarity:

C. L., a German, 37 years old, was brought to this hospital about 3 A.M. He was injured in a sugar refinery by a bar of iron eighteen inches long and five pounds in weight, which had been violently hurled from a centrifugal machine, striking him. His condition was low, skin cold and clammy, pulse feeble and accelerated. His respirations were short, shallow, and frequent, and accompanied by a “wind-and-water” sound, and by the expulsion of frothy blood from the wound. His temperature was ninety-seven and two-fifths, and he was very restless, evidently suffering considerable pain.

Upon examination, a wound, four inches long, in the left infra-mammary region was found, through which a mass of omentum, the size of a man’s fist, protruded.

Further examination revealed a fracture of the seventh and eighth ribs and a lacerated wound of the diaphragm two and a half inches long, about one inch from its origin from the chest-wall, and almost parallel with it.

If the fingers were placed in the wound, the heart could be felt beating.

The omentum was returned, and the external wound closed by adhesive straps, allowing for free drainage at the dependent part.

Beef-tea and milk-punch were ordered, one-quarter of a grain of morphia was given hypodermically, and hot applications, as bottles of hot water, and blankets, were placed around him.

The man's condition being no worse at noon of the same day, I decided to stitch up the wound in the diaphragm, which I did with fine silver sutures, the ends of which were brought through the external wound. This latter itself was stitched, and drainage and dressing of carbolized lint used as before.

The patient was more or less restless throughout the day, and considerable frothy blood passed away. His condition remained about the same until evening, when there was a change for the worse, his pulse and respiration becoming more feeble and frequent.

His restlessness was controlled by morphia, and his stimulants increased, but, notwithstanding all care, he died about 11 P.M.

A post-mortem examination showed, in addition to the above, a lacerated wound one inch long, in the extreme lower edge of the lung, with several small, superficial patches of collapsed lung in the posterior part of the lower lobe, and also about one pint of frothy blood in the pleural cavity.

I shall now bring before you one of those grave cases often met with in this hospital, which are peculiarly liable to occur in the mining-regions. I refer to fracture of the vertebræ.

Fracture of the spine is due, as in fracture of other bones, *first*, to *direct violence*, as a fall directly upon the vertebræ, or in the case of a heavy weight, as a wagon-wheel or heavy brick wall, acting upon the seat of injury; *secondly*, to *indirect violence*, as when a man falls from a height upon his feet, the force necessary for the fracture being communicated through the limbs, or, when he falls upon his head, the force being transmitted through the column itself.

Another factor that should always be remembered in these cases is, that the spine may be broken through *extreme flexion*.

A good example of this is found in the case of a man working in a well, in a necessarily bent position. If at such a time the wall should fall in upon him, the chest would be forced down upon his knees, and the vertebræ so forcibly flexed as to bring about fracture.

The spinal column may be broken in any of its parts, either through the bodies of the vertebræ, their spines, or their arches. Perhaps the most common seat is the arches.

The gravity of the injury is due to the violence done to the contained substance, the spinal cord, and the cutting off of the nervous supply to important organs. Thus, a fracture as high up as the third cervical vertebra is excessively grave, involving as it does the phrenic nerve, the great motor nerve of the diaphragm.

The most common seat of fractures of the spine, I may say, is between the last dorsal and the first lumbar vertebra.

I have said that extreme flexion is an important factor in this injury; and, as the point of greatest anterior flexibility of the column is near the last dorsal vertebra, you can see in this a reason for the frequency of fracture at that point.

I would say here that, owing to the peculiar manner in which the vertebræ are articulated, there being so much interlocking, dislocation without fracture can hardly exist.

In most cases of fracture of the spine you have general paralysis below the point of injury; thus, if at the last dorsal, it would interfere with respiration somewhat by paralyzing the muscles of the abdomen, and would also, lower down, involve the bladder and rectum.

This last symptom is a most important diagnostic point, no matter at what point the fracture may exist.

As a rule, there is retention of the urine for the first few days, followed by constant dribbling, and usually, also, constipation, succeeded by involuntary evacuation of fæces.

In regard to treatment, there is scarcely any mechanical treatment possible. Of course, if you could readily determine any displacement of the fragments, you would be justified in using some means, as extension and counter-extension, to remove it; but this is scarcely ever needed.

Our attention should rather be directed to the secondary symptoms, such as the

results of the paralysis of the bladder and rectum, than to the primary lesion.

The first, and I think the most important, point requiring remembrance is the fact that these patients incur great danger from the formation of bed-sores, resulting either from pressure upon prominent parts of the body, as the nates, calves, and heels, or from the irritation of the constantly dribbling urine.

This condition, when present, you will find exceedingly troublesome to cure, as well as very dangerous to the patient.

The avoidance of this complication can be best accomplished by the use of the water-bed, if that commodity can be possibly obtained. This, you will find, will equalize the pressure and adjust itself nicely to all the curvatures and irregularities of the body.

Of course, such a convenience, which, you know, is merely a rubber sack filled with water, cannot always be readily obtained; if such be the case, a good substitute can be made with a simple wooden trough, large enough to admit the whole body, and filled with water, over which is stretched a rubber cloth.

In directing your attention to the bladder, you will not only be obliged to draw off the urine, but, as it often becomes highly phosphatic, or even putrid, it is a good plan after the bladder is emptied to wash it out thoroughly with a saturated solution of boracic acid, or a weak solution of carbolic acid.

Our patient, whom I now bring before you, was working at the elevated railroad, where a heavy wall fell upon him, producing a manifest fracture of the spine.

The bone thought to be broken is in the lower dorsal region; but we will not disturb our patient with further investigation.

His symptoms are the usual ones, namely, total paralysis up to the point of lesion, pain and redness at that point, involuntary evacuations, and incontinence of urine.

You see he is floated upon the all-important water-bed, thus guarding all salient points from pressure, and a vessel is kept constantly in position to catch the dribbling urine.

This, with attention to his diet and cleanliness, will make our patient as comfortable as his condition will admit.

TRANSLATIONS.

PHYSIOLOGICAL ACTION OF PILOCARPIN.

—Dr. Albertoni publishes an elaborate essay on this subject in the *Giornale la Salute*. He first speaks of the general effects of the drug, giving the account of an experiment made by a Dr. Wontonini, who says,—

“I took sixteen grammes of jaborandi leaves in two hundred grammes of water, the infusion being yet warm. I was suffering from an attack of acute rheumatism. Just one minute after having taken the infusion, which I took in a single dose, I felt my skin covered with a profuse perspiration.

“While I was sweating profusely, my salivation commenced, with at the same time great difficulty of respiration. At this period vomiting came on, and I rejected a great part of the infusion. After this attack of vomiting I did not feel relieved, and still experienced the desire to vomit.

“The salivation and perspiration continued, so that I felt as if I were surrounded by a zone of steam.

“Half an hour after the ingestion of the medicine I was the subject of hallucinations. Looking at a single candle with a single flame, it appeared to me as if composed of *seven* or *eight* different flames, each being of much greater dimensions than the original.

“At times I imagined myself attacked by wolves and bears, and heard also, as if at a remote distance, sounds resembling those heard on a battle-field. These phenomena lasted for three hours, during which I felt very near death. My rheumatism persisted notwithstanding my tremendous sweating.”

On Dogs.—In dogs poisoned with pilocarpin the respiration, at the beginning not modified, grows less frequent and more difficult, and a great degree of dyspnoea may supervene. With the occurrence of dyspnoea the pupil, until then contracted, dilates. Death is preceded by muscular tremors or generally by paralysis,—more rarely by convulsions or loss of sensibility or of consciousness. Death occurs ten hours or longer after the hypodermic injection of the largest lethal dose.

The fatal dose is one centigramme for each kilogramme of body-weight.

Action on the Nervous System.—The pilocarpin has not a direct influence on the encephalon. The cephalalgia and the mental depression are to be largely attributed to the vomiting, salivation, and vascular modification.

In a dog some moments before death attacks of convulsions were noticed, particularly tonic cramps of the limbs. But, as the heart's action was very feeble and the brachial pulse could not be felt, it was inferred that the convulsions were due to anæmia. And these convulsions were almost always present when the medicine was injected in a vein. Also, therapeutic doses produce modification in the cerebral circulation. As an example the following may be cited. In an old dog weighing eight kilogrammes, Dr. Albertoni exposed the circulation in the right temporal region, and then injected into the animal fifteen milligrammes of the salt. Five minutes passed, when saliva commenced to flow, and then the cerebral cortex became more and more rosy and the vessels larger. After a quarter of an hour the hyperæmia vanished and anæmia took its place. The cardiac action then greatly diminished, becoming feebler and feebler at every moment. When emesis commenced the anæmia became more prominent. We can see from this that the mental depression is due to anæmia of the encephalon. In warm-blooded animals, as well as in cold-blooded, if a large dose of pilocarpin was administered a diminution of excitability of the motor nerves and an irritability of the striated muscular fibres were witnessed.

Circulatory System.—Colland and Rahow assert that the injection of one or two centigrammes after the lapse of two or three minutes produces in man an increase in the pulse-rate of ten to thirty beats per minute, diminishing the arterial pressure. Later, when the flush is replaced by pallor, the frequency of the pulse is still less. Leyden affirms that in man a medicinal dose dilates the arteries and veins, the pulse becoming more frequent and stronger, and dicrotic and subdicrotic. The sphygmograph shows, as demonstrated by Kahler and Seyka, that jaborandi produces stasis of the blood-vessels. By small doses of the medicine augmentation of the frequency of the pulse and a moderate lessening of arterial pressure are obtained; by somewhat larger doses, diminution of the pulse-rate to thirty

or thirty-two pulsations per minute and moderate augmentation of the arterial pressure; by still larger doses, diminution of arterial pressure and retardation of the pulse-rate to eight or ten beats per minute. This is attributed by Leyden to the stimulation by the drug of the intracardiac fibres of the pneumogastric, and not to stimulation of the heart itself.

In Dr. Albertoni's experiments, retardation of the pulse was more prominent in dogs than in cats and rabbits. There are two stages capable of notation in the dog's pulse after the injection of pilocarpin,—first, acceleration; secondly, retardation. With medicinal doses the retardation of the pulse is slight, with fatal doses it is great and persistent.

In all his experiments Dr. Albertoni found that pilocarpin reduces the arterial pressure, which is due to anæmic irritation of the nervous centres, explained by the destitution of blood in them. The action of pilocarpin is not confined to the heart alone, but is extended to all the circulatory system. When in the frog the lymphatic ganglia are examined, they are found to be affected *pari passu* with the circulatory apparatus. The primary acceleration of the pulse is partly due to stimulation of the excito-motor apparatus of the heart.

Respiration.—Acceleration of respiration always takes place when a fatal dose of the drug is injected. *Pari passu* with the retardation of the pulse respiration augments in acceleration, reaching the point of intense dyspnœa, which ceases with the last movement of death. Such dyspnœa depends,—first, on the influence of the circulation; secondly, on the accumulation of secretion in the respiratory tract; and, thirdly, on œdema of the organs of respiration.

Temperature.—In man, in medicinal doses, in the second stage, and after the profuse perspiration, a slight lowering of temperature occurs, and this persists until death.

Secretion.—The salivary glands are greatly affected by the drug. Dr. Albertoni found that one centigramme of the pure alkaloid augmented greatly the secretion during the first hour. After this the secretion diminished, but lasted for nearly two hours. The quantity secreted in that time was from two hundred and ten to two hundred and eighty grammes,

being neutral and containing sulphocyanuria.

Lewin asserts that in his recent experiments, 0.015 gr. of pilocarpin excited two hundred and eighty cubic centimetres of secretion.

A larger dose excites a less quantity of saliva, but much more dense, and especially so when vomiting supervenes together with diarrhoea.

Like Langley and Nawrocki, Dr. Albertoni observed that pilocarpin produces, just after the destruction of the secretory nerves, a copious salivation of the sub-maxillary glands. It appears probable that salivation depends upon excitation of the glandular secretory nerve-endings.

Dr. Albertoni repeated the experiments of Luchsinger and Nawrocki in cats and dogs, consisting in the section of the sciatic nerve, and after the operation a profuse sweating of the corresponding leg occurred.

In new-born cats pilocarpin produces salivation, but not perspiration.

Antagonism and Antidotism of Pilocarpin and Atropin.—Dr. Albertoni's experiments prove that an animal to which a fatal dose of jaborandi has been given may be saved by the proper administration of atropin. I administered both hypodermically, and when the retardation of the pulse had reached its maximum. A few minutes only were necessary to bring the pulse from twenty or twenty-five to one hundred, and the vomiting and diarrhoea promptly disappeared. P. BÉTANCOURT.

TREATMENT OF LUPUS VULGARIS.—E. Schiff (*Vierteljahresschr. für Derm. u. Syph.*, 1880, p. 247) draws attention to the valuable but too little known contribution of Auspitz on the mechanical treatment of skin diseases, published in the same journal in 1876. Auspitz recommended, in place of the old method of cauterizing the lupus nodules with caustic potassa, that the sharp spoon or curette of Volkmann should be employed, either alone or in connection with the caustic. In addition, Auspitz recommended multiple pincture by Volkmann's method, and described a combination of the curette with a needle by which the desired end could be the more easily attained. Auspitz, however, confessed his procedure not altogether satisfactory, and suggested that the following method should be followed. The sharp point of the needle attached to

the back of the spoon is first dipped in a solution of one part of iodine in twenty of glycerin, and then thrust into the lupus nodules. This process works very well, and in some cases with surprising success. But Schiff has recently devised a better method. For it will be found on trial that the continual dipping of the needle into the caustic fluid is a tiresome business, on the one hand, and, on the other, the very act of thrusting the needle into the tissues wipes off a large part of the fluid, which is thus lost. To obviate this difficulty Schiff has devised a sort of needle pipette, the point of which is hollow and sharp, like that of a hypodermic syringe, and to which is attached a hollow india-rubber ball. The whole instrument is not unlike the dropper used by ophthalmologists. It is evident that by this means a drop of the caustic fluid can be introduced without difficulty into the middle of a lupus nodule, and can then do its work effectually. Schiff adds the notes of several cases in which this procedure has been used, and which go to show its advantages in a striking manner. In the case of a scrofulous young girl who had suffered with well-marked nodular lupus vulgaris of the forearm, the patch being the size of an egg, the injections were employed twice to thrice weekly, while emplastrum hydrargyri was kept applied meanwhile. Within three months the disease had entirely disappeared, and up to one year subsequently showed no signs of return.

ON THE COMPOSITION OF JABORANDI.—Dr. Albertoni (*Giornale la Saluta*) states that in Italian commerce a new preparation of pilocarpin has been introduced, under the name of *Pilocarpina Sciroposa Pura*, which, if dissolved in water and applied to the eyes of man, produces at first notable myosis, which will cease in the course of an hour, and then a mydriasis will follow, lasting from twenty-four to sixty hours. Pure pilocarpin and its salts never cause this secondary mydriasis in any dose. Longley had noticed some difference in the action of some of the preparations of the drug upon the heart, and Hardy—the first who investigated the chemical composition of jaborandi (without extracting the pilocarpin)—showed that the difference was probably due to the presence of another alkaloid. In some of the jaborandi of commerce Dr. Albertoni was able to discover only the myotic action.

Taking a certain quantity of pilocarpina sciroposa, and adding a little of H_2Cl , Dr. Albertoni found that most of the substance crystallized. He separated the crystals, washed them with ether, and found that myosis was the only effect produced by them. The non-crystallizable part, which constitutes always a slight proportion of the entire mass, he also collected, and subjecting it to experiments obtained mydriasis,—its effects in general resembling those of atropia, and opposite to those of pilocarpin. He calls this new substance *anti-pilocarpin*. P. BÉTANCOURT.

TESTS FOR THE SALTS OF JABORANDI.—Roehl gives the following tests for the salts of jaborandi:

I. Phospho-molybdic acid gives with the salts of pilocarpin a *white caseous* precipitate, which detects 1 in 10,000 (watery solution), by adding HCl . 1 to 15,000.

II. Iodide of potassium (when saturated) gives a *white* precipitate in a solution of 1 to 10,000.

III. Iodide of potassium and bismuth gives a *reddish-brown precipitate* in a solution of 1 to 15,000.

Roehl attaches great importance to the *green* color which is obtained through the sulphuric acid and bichromate of potassium, and to the mode of behavior of its solutions so colored when seen by means of the spectroscope.

Cristowski, under the directions of Dragendorff, found, like Roehl, that pilocarpin could be isolated from its solutions by chloroform.

Besides the above tests we have the physiological, which is the most decisive.—Extract from *Giornale la Salute*, 1880.

P. BÉTANCOURT.

PARALYSIS AGITANS—POISONING BY HYOSCYAMIN.—M. Empis, at a recent meeting of the Société Médicale des Hôpitaux (*La France Méd.*, 1880, p. 651), reported that he had frequently given hyoscyamin in the dose of one to four milligrammes without having obtained well-marked physiological effects. In the case of a patient suffering from paralysis agitans, however, he prescribed pills of five milligrammes of this substance. The patient took his pill in the evening after dinner. Some minutes later he was seized with a sort of drunkenness, nausea, and vomiting; for some hours subsequently he felt very ill. He was not seen until the following morn-

ing. Meanwhile, finding after the vomiting was over that his hands trembled much less violently, the patient rashly took another pill. Dr. Empis, arriving a little later, found him feeling as if intoxicated; the trembling appeared to have ceased, he had a sensation as of mastic in the mouth, a little dryness of the throat, some nausea without vomiting. Violent delirium soon supervened, lasting several hours. There were four or five tetanic attacks. The patient failed to recognize his family, he saw animals about him, etc. In about three hours he began to recover. The next day he had no recollection of what had passed except the dreams of animals. M. Empis recommends that hyoscyamin should be given in one milligramme dose at first.

ACTION OF CARBOLIC ACID ON THE ANIMAL ORGANISM.—Th. Geis (*Chl. f. Chir.*, 1880, p. 679) has attempted the experimental solution of certain as yet undetermined questions regarding the toxic action of carbolic acid, and has come to the following conclusions. He considers, with Salkowski, that increased irritability and excitability of the spinal cord are to be regarded as the causes of the convulsions. Carbolic acid paralyzes the vasomotor centres in the medulla oblongata; increase of blood-pressure does not occur with this. Conduction and dynamic force of the muscles are reduced decidedly below the normal in a frog poisoned with carbolic acid. The salivary and the perspiratory secretion are increased; the first very decidedly; whether the latter occurs from irritation of the chorda tympani, sympatheticus, or the glands, remains for further investigations to show. After death the brain shows the largest amount of phenol, then the kidneys, the blood, and the liver; the muscles show the smallest quantity. In poisoning by small and medium quantities, the cause of death, according to Geis, is paralysis of the respiratory centres. When large doses have been taken, the cause of death is stoppage of the heart and of respiration.

PHYSIOLOGICAL ACTION OF CONIUM MACULATUM.—In a communication made to the Académie des Sciences (*La France Méd.*, 1880, p. 650) MM. Bochefontaine and Tiryakian have given expression to the idea that conium maculatum contains two active principles endowed with different qualities, *conine*, *conicine*, or *cicutine*, a

paralyzant to the central nervous system, and another which acts almost like curara. A salt obtained from hemlock by M. Mourrut, the bromhydrate of conine, gives results similar to those obtained from conine. According to M. Bochefontaine, who through M. Gosselin has recently presented to the Academy a new communication on this subject, conine is absorbed by the mucous membrane of the digestive apparatus, for, having been given in a liquid form to a number of individuals, it has been found to cause general debility and the disappearance of violent pains in the stomach. Conine diminishes or abolishes the physiological properties of the nervous centres before acting like curara on the nervo-muscular connective substance. M. Bochefontaine formulates the comparative action of hemlock and curara thus: hemlock may act as curara, but it produces in addition certain physiological effects which are not noticed in animals submitted to the influence of curara.

ETIOLOGY OF CHRONIC OSTITIS AND PERIOSTITIS.—Lücke (*Deutsche Zeitschr. für Chir.*; from *Cbl. f. Chir.*, 1880, p. 680) maintains that there are forms of chronic ostitis and periostitis which, although showing the same histological formation as the well-known tubercular forms, are in fact due to other causes, the prognosis in these cases being much more favorable. Most infectious diseases, acute or chronic, play a part here. In pyæmia (particularly puerperal) it is known that often, after the peculiar symptoms have passed away, secondary deposits may occur in the joints or in the epiphyseal ends of the bones. After acute infectious osteomyelitis and periostitis, the deposits are not infrequently observed to become encapsuled, latent, and later to take on a chronic form, to break out again when opportunity is given by fevers, anæmia, or trauma. The same is noticed after typhoid, variola, scarlatina, measles, diphtheria, whooping-cough, erysipelas, malaria, gonorrhœa. Syphilis is known as a cause.

TREATMENT OF EFFUSIONS OF BLOOD INTO THE CELLULAR TISSUE.—Dr. Constant (*Thèse de Paris*, 1880) says that these effusions are to be variously treated, according to the general health of the patient and the condition of the locality attacked. If not absorbed or evacuated, they may be transformed into cystic or solid tumors, which, however, do not in any case un-

dergo change into malignant neoplasms. When large, they show little tendency to disappear spontaneously, and in such case cure may be attained by simple puncture, which is not followed by any accident, and which shortens very notably the duration of the trouble. If the skin covering the effusion becomes gangrenous, timely evacuation, before suppuration can occur, becomes all the more necessary, the danger, after the collection opens, being in direct ratio to the quantity of blood it contains. In case of suppuration, surgical interference becomes imperatively necessary, and the operative procedure is that required in a case of hot abscess. Old effusions of blood may be treated in various ways, as puncture, followed by stimulating injections, incision, or even extirpation, according to their condition, whether they are still in the liquid state or have become veritable solid tumors.

MENSTRUATION AFTER HYSTERECTOMY.—Dr. Tillaux (*Bull. Gén. de Thérap.*, vol. ii., 1880, p. 231), completing the observations communicated by him to the Académie de Médecine relative to a woman operated upon last year, remarked that this individual, in whom the entire uterus except the cervix had been removed, had subsequently exhibited, as before the operation, the phenomena of menstruation. It must be stated, however, that both the ovaries had been preserved intact. In two other women, one of whom had retained the ovaries after hysterectomy and the other had suffered their removal, the menses had in the first case appeared and were kept up, while in the latter case they disappeared and did not return.

DOUBLE URETHRA.—J. Dollinger (*Pester Med.-Chir. Presse*; from *Cbl. f. Chir.*, 1880, p. 688) reports a case of a man of 28 who had urinated through two openings from birth. The penis and glans were well developed. On the dorsal side of the glans was a deep gutter, which ran into the cavernous portion of the penis. Three and a half centimetres behind the point of the glans this gutter ended in an opening the size of a No. 12 catheter, and three and a half centimetres in length, which terminated in the normal urethra, the external opening of the latter lying farther up, so that a sort of epispadias existed. An operation resulted in restoration of the normal relationship of parts.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 20, 1880.

EDITORIAL.

GYNÆCOLOGY, VIEWED BY A
GENERAL PRACTITIONER.

ALTHOUGH gynæcology is acknowledged as a true specialty, it must be admitted that it occupies towards general practice a very different position from that of ophthalmology. It is allied so closely to obstetrics, which of necessity, till the very constitution of things is altered, must form a prominent part of the family physician's work, that it is hard to draw the line and say how far the general practitioner should intrude himself upon the gynæcologist's field, or, more properly, how far the gynæcologist should be allowed to usurp the field already occupied from time immemorial by the family practitioner. At what shall the latter stop? Certainly he must know enough to perceive the necessity for recommending his cases to the specialist; and between the knowledge requisite to diagnose a uterine displacement and that required to rectify it by a properly-adjusted pessary is but a small step; and in local congestions, erosion of the cervix, menorrhagia, leucorrhœa, the use of the curette, and applications to the cervical canal, and even to the fundus uteri—at what point is he to pause?

Perhaps the greater operations—the removal of tumors, polypi, fibroids, and ovarian cysts, the cure of fistulæ and lacerations—would about cover the field of the gynæcologist and indicate the point where the family doctor could leave his patient, having seen her safely there, in the hands of the great man. But the specialist is not by any means disposed to limit his practice in this manner. He claims the right to be considered an ex-

pert in obstetrics on occasion, and considers himself as the only proper custodian of all cases of uterine disease; nor do his large fees leave the usual attendant any chance, for where the circumstances of the patient are too limited to admit of such payment he offers the facilities of his free clinic or dispensary, with the ægis of his great name.

In rural practice, of course, the specialist is not so accessible, but it is a mean city to-day which cannot boast at least one skilful gynæcologist, and the already narrowed field of practice on which, it seems, we general practitioners have been squatting since the time of Hippocrates is being rapidly claimed and enclosed by these lords of the soil, till at last it may happen that the whole class of general practitioners will be evicted to make room for still more enterprising claimants, who will divide and subdivide till, by retributive justice, the holdings will become too small to support their occupants. Then the specialist who removes ovarian tumors will sullenly glare at him of the uterine fibroids, and the wielder of the tenaculum come to blows with him of the curette.

But to avert that dreadful day it behooves each practitioner to fit himself as much as possible for advanced gynæcological work, that the patient, if she by evil chance break forth from his hand uncured, may at least have paid him tithe before she goes. To acquire this knowledge requires both courage and industry. Only those especially favored by circumstances and location can enter again upon a student's career, and books must therefore afford them the information which the graduate of to-day has almost unconsciously imbibed.

The books that are to supply the stone for these defensive fortifications are not far to seek: they are furnished by the enemy himself. They should be, not the work of a novice, who teaches himself as he writes, nor the product of the book-maker, who

sees in publication a rapid step to reputation, nor even the labored compilation or the elaborate treatise of the scholar, but books which are the mirror of the daily work, the daily and hourly experience and expedients, of a practical master. The new edition, so fresh that it yet reeks with the odor of the printing-room and the bindery, of the treatise by Prof. Thomas, of New York, might well furnish the material for the first line of intrenchments, whilst to the inner citadel might be assigned the "Lessons in Gynæcology," by our fellow-townsmen, Dr. Goodell.

Lay deep, then, O brother-practitioners, the foundations of that knowledge which shall be our sure defence against that spectre, whose name is Gynæcology, which now confronts us in the doorways of our choicest patients,—

"A formidable shape:

The one seemed woman to the waist, and fair,
But ended foul in many a scaly fold,
Voluminous and vast, a serpent armed
With mortal sting."

WE are always pleased to note honors paid to naturalized as well as native citizens of Philadelphia. The late Benjamin Cartwright, of Newark, New Jersey, besides leaving a sum of money to the Pathological Laboratory Fund of the Alumni Association of the College of Physicians and Surgeons in New York, established a course of lectures to be given yearly, and Dr. Roberts Bartholow has been selected to deliver the first course.

CORRESPONDENCE.

BOSTON LETTER.

MR. EDITOR,—Do we, in our rich possession of the advantages of medical centres,—the hospital, the clinic, the well-stocked library, the ever-freshly-laden tables of the medical reading-room, and, above all, the abundance of opportunity, when we are cornered, to consult other and wiser men than ourselves,—do we realize the severity of the deprivation of all these comforts, luxuries, and aids which it is the lot of the country practitioner to bear? How enviable, in these respects, must he consider our privileges! If

he can afford it, he has his medical journal, and occasionally allows himself the luxury of a new book. But in the monotony of his daily round, his long drives over hill and through woods in dark night and stormy day, what has he by way of medical refreshment and professional recreation? Nothing but his little shelf of books, his love of medical work, his good courage, self-confidence, and self-dependence. A dreary outlook, one would think; a most juiceless life. But yet there must be a compensation in the thought of duty faithfully performed, of unselfish and untiring devotion to the sick in the face of small fee or none at all.

They are brave, true-hearted men, these isolated, hard-working country doctors. And their mere isolation and lack of all brotherly intercourse with fellow-practitioners give them a fibre, a mental muscle, a fertility of expedient, a coolness in danger, a power of self-knowledge and self-reliance, which many a city physician never has the opportunity for developing. I am not sure that the life of the country doctor would not prove a wholesome tonic to us of the cities. Every need of ours can be supplied almost on the instant; aid and instruments of every sort lie ready to our hand or within call. But the doctor of the hill, wood, and farm must depend upon himself and his few instruments. His aids are the uncultured people about him. What he does in a time of danger must be done at once or not at all. Waiting brings *him* no help. And thus he learns to meet difficulty with readiness. Thus is he forced to create his own resources. Thus he rounds out his every faculty, moral, intellectual, and mechanical. If you have ever talked with one of these prompt, cool, unflinching men, you doubtless have been surprised by his common sense, his faculty of observation, his intuitive power in diagnosis. He is not a theorist, not a book-man. He follows modes of treatment which are credited to great names in the books, but he may never have heard or read of them. He is a sort of medical Robinson Crusoe, who hews out his own appliances, overcomes obstacles and dangers with means of his own improvising. Happy is he if he have the help even of an untutored Friday. All honor and respect to these noble men, say I. Without praise, without fame, perhaps almost unknown, save in the little circle of their patients, they toil on without rest and with little reward until they die. One joy they do possess; they are devotedly beloved and honored by those whom they serve.

It occasionally occurs, however, that the ability of a country physician is of a quality and accomplishes results which cannot be kept under a bushel. He does a surgical operation of infinite difficulty under conditions which would absolutely discourage a man of a lower degree of self-reliance, or he brings about a recovery from the very jaws

of death by an instantaneous appliance of a remedy the details of which would deter a city physician from making use of it unless he had every complication of modern improvement to aid him, while his country *confrère* will satisfy himself perforce with the veriest of all primitive materials, and be successful at that.

Let me tell you of such a man, one who has been famous, who became famous in spite of his modesty, and whose memory should be revived, for it is in danger of being forgotten.

Dr. Amos Twitchell, of New Hampshire, born in Dublin, of that State, in 1781, became an office-student under Dr. Nathan Smith in 1803, after graduating at Dartmouth. He began to practise in 1805. At the expiration of two years he wrote, "I find I am doing poorly; some of my patients have run away, others are unable to pay, and not any of them *do* pay." Experience of this nature depressed him. He moved to another village, with the purpose of devoting himself to surgery. He had enjoyed a somewhat large experience in dissection under Dr. Smith, and surgery was his natural specialty. Having already been two years in country practice, his native courage, quickness of decision, and readiness in resource had rapidly matured.

It was just at this time that he performed an operation which invested him with a fame of life-long endurance. This was nothing less than *tying the common carotid*, which, while common enough now, at that time, to Dr. Twitchell at least, was an unknown procedure. Hebenstreit, a German surgeon, in a translation of Benjamin Bell's Surgery, mentions a case in which the carotid was wounded during the extirpation of a scirrhous tumor. The surgeon at once tied the trunk of the vessel, and the patient recovered. This, according to Cooper's Surgical Dictionary, is probably the first authentic instance of ligation of the common carotid. In 1798 Abernethy was forced to tie the carotid in a case similar to Twitchell's, but the results were such as would only confirm the general belief of that day, that the operation was neither allowable nor safe. In 1803 Mr. Fleming, an English naval surgeon, tied the vessel in a case of attempted suicide, and saved his man; but the case was not published until 1817. In the same year (1803), according to Dr. Bowditch (Twitchell's biographer), Dr. Cogswell, of Connecticut, tied the carotid during an operation for the removal of a cervical tumor; the patient died in three weeks, and the details were not published for years afterwards. Velpeau states that in 1804 Dubois intended to do the operation, but his patient died before he had begun. In 1805 Sir Astley Cooper operated for aneurism of the carotid, and tied the trunk; the patient died. And it was not until 1808 that Cooper "proved the feasibility of tying this vessel with perfect

safety to life." He did not publish his case until 1809.

It seems, then, that when Dr. Twitchell did the operation, in October, 1807, not only was surgical opinion generally opposed to it, but that no previous operation, with the exception of Abernethy's, could have been known to Dr. Twitchell in a published form; and Abernethy's case was not encouraging, for his patient's brain became affected, and he died. Moreover, Dr. Twitchell positively asserted that he was totally ignorant of the fact that the vessel had previously been tied by any one, although from his own experiments on animals he had been led to *surmise* that it could be closed in man. So much do we learn from his biographer, who adds, "Why, then, should he not stand in the same rank with Abernethy and Fleming, so far, at least, as one operation shows the calibre of a man's mind?" But I suspect—a point of comparison not touched by Dr. Bowditch—that both Abernethy and Fleming had every convenience and a staff of assistants besides, while Twitchell was almost absolutely unaided at a moment of terrible stress and danger.

Moreover, when Abernethy tied the carotid he was thirty-four years of age, and had been practising surgery at least twelve years. The age of Mr. Fleming does not appear; but, since he was an English naval surgeon, and performed his operation in 1803, it is more than probable that his age was mature, and he undoubtedly had seen a vast amount of surgery during the peppery times in which he lived. One other point. Both Abernethy and Fleming, especially the former, naturally had seen much surgical practice in hospitals. Now look at the other side of the shield:

When Dr. Twitchell tied the common carotid he was only *twenty-six* years of age, had been in practice but *two* years, and of course, even while educating himself in medicine, having *always* lived in the country, he had seen but a very limited amount of surgical practice. In any case, surgical operations in this country, between the years 1800 and 1804, were nowhere very numerous.

For the other details of the case let me briefly quote from Dr. Twitchell's notes: "During a mock-fight a cavalry soldier received a wound, from a pistol discharged near him, on the right side of the neck and face." The injury was very serious. On the tenth day he writes, "I applied the usual dressings, left the room, and was about leaving the house, when some one cried out that the patient was bleeding. I hastened back, and found him deluged with blood. The dressings were immediately removed, and the blood jetted forcibly in a large stream to the distance of three or four feet. With the thumb of my left hand I instantly compressed the artery against the base of the skull, and thus effectually controlled the hemorrhage. The patient had fainted, and fifteen or twenty

minutes elapsed before he was so much relieved that I dared make any attempt to secure the artery. Then, still keeping my thumb firmly pressed on the orifice, I proceeded to clear the wound from blood; and, having done this, I made an incision with a scalpel downward along the course of the artery to a point more than an inch below the location where the external branch was given off, and which, as mentioned, had been destroyed at the time of the injury. *Having but one hand at liberty, I depended upon the mother of the patient to separate the sides of the wound* [italics mine], which she did, partly with a hook and occasionally with her fingers. At length, partly by careful dissection and partly by using my fingers and the handle of the scalpel, I succeeded in separating the artery from its attachments, and, passing my finger under it, I raised it sufficiently for my assistant to pass a ligature round it. She tied it with a surgeon's knot, as I directed, at about half an inch below the bifurcation." And thus, with *no other assistant than an aged woman*, and she the mother of the patient, and with *only one hand at liberty*, did this brave young man perform the hazardous operation the details of which he gives with such striking modesty!

But the call upon his ingenuity and coolness was not yet ended. "I removed my thumb," he says, "and sponged away the blood, not doubting that the hemorrhage was effectually controlled; but, to my surprise and disappointment, the blood immediately began to ooze from the rupture in the artery" (collateral circulation), "and in less than ten minutes it flowed with a pulsating jet. I again compressed it with my thumb, and began to despair of saving my patient. What further could I do? It was impossible to apply a ligature above the orifice; compression, then, was the only alternative." After considering the pros and cons of digital compression, he finally raised his thumb and applied a bit of dry sponge over the orifice in the artery, upon this a second and larger piece, thus adding piece after piece, each being a little larger than its predecessor, until he had filled the wound with a firm cone of sponge, which pressed upward and backward against the base of the skull, the broad portion of the cone projecting two or three inches externally. This was fixed by a roller-bandage, and the patient was then put to bed. His escape from death was a narrow one, but the wonderful and ready coolness and ingenuity of Dr. Twitchell had saved him, for he made a good recovery.

Dr. Twitchell, with characteristic modesty, subsequently wrote, "This case seemed to me at the time highly important and valuable, since it established facts which, so far as my knowledge extended, had not till then been known. The question of the practicability of the safe application of the ligature

to the common carotid artery was, in my opinion, now solved." But, in spite of this opinion, Dr. Twitchell would not allow the publication of the case until thirty years had elapsed, and then only upon urgent solicitation, because *the operation was forced upon him, and not undertaken voluntarily*.

Is there another case on record of ligation of the common carotid by a young surgeon of only two years' practice, *the operation being performed with one hand and an ordinary scalpel, the only assistance being rendered by an old woman, and she the mother of the patient*?

In 1840 Dr. Twitchell made what was then considered a very remarkable diagnosis. He asserted that a patient who had been under the care of the most eminent of the faculty had pus in the tibia, and, upon trephining the bone, found one and one-half ounces of pus. Sir Benjamin Brodie, in 1832, had published a paper giving details of two similar cases in which he had trephined; but Twitchell thought this operation was his own, for he had never heard of or seen Brodie's paper. He was offered professorships in various New England colleges, but declined them all. He was invited to move to Boston, but preferred to remain in Keene, to which place he finally moved, and where he died in 1850, beloved by all who knew him and held in high esteem by his contemporaries throughout the country.

Surely the memory of such a man—a thorough physician and a brilliant surgeon—should be kept fresh. I am glad to say that a fine likeness of Dr. Twitchell occupies a prominent place in the rooms of the Boston Medical Library Association.

A brief allusion may be made to a second country physician and surgeon now living in Keene, New Hampshire, and considered the leading surgeon of his State. I refer to Dr. George B. Twitchell, nephew of him whose ability I have endeavored to show, and who seems to have inherited the self-reliance, ready skill, and courage in emergency so characteristic of his uncle. A single instance of his power will suffice.

In August, 1879, this gentleman was called, in consultation, to a case of progressive anæmia. The patient was a woman aged 45, who had fallen through a broken floor. This was followed by severe cramps in the stomach and bowels. Constipation and vomiting supervened, the latter being so violent and incessant that it continued almost without exception for five weeks. Every means of nourishing the patient had been tried in vain. She became so reduced and so feeble that the radial pulse disappeared and the respirations numbered only five to the minute. When Dr. Twitchell was called, he said that in transfusion lay the only hope of saving the patient. With Dr. S. A. Mason, of New York, who temporarily had charge of the case, the possibility of procuring instruments from New

York was discussed; but it was seen that the emergency was too serious: death would ensue before the instruments could be obtained. It was then decided to use such aids as were at hand. Dr. Twitchell went for an old canula once belonging to his uncle, and for a fountain-syringe. With these primitive aids and a scalpel the operation was performed. Blood was drawn, to the amount of six or eight ounces, from the arm of the patient's son. It was caught in a bowl, the fibrin whipped out with a fork, the blood being kept at the proper temperature by setting the bowl containing it in a dish filled with warm water. Finally it was filtered from coagula by means of a handkerchief. Everything being ready, Dr. Twitchell began the operation, but was at once disheartened by what threatened to be a fatal syncope. The patient, however, was revived, and Dr. Twitchell proceeded. He had only the old imperfect canula, which lacked a trocar, and, moreover, the vein of the patient's arm was so collapsed that a dissection was necessary. Following this, the vein was lifted and incised, and the canula, having been attached to the syringe by slipping the hose over its free end, was introduced into the bloodless vein. The syringe, of course, before the blood was emptied into it, had previously been warmed and cleansed by means of hot water. So soon as the blood began to flow, the patient, who could not speak aloud, whispered, "I feel that blood." From an imperfection in the canula, some of the blood was lost. Six ounces more were therefore taken from the son's arm, and, after having been put through the defibrinating process already described, were injected without loss. At the close of the operation the patient's cheeks showed a slight flush. A little milk was given, and, for the first time in weeks, was not rejected by the stomach. Nourishment was carefully administered in increasing amounts, and the result was a complete recovery of health.

This operation, it seems to me, in its way, was as daring, and showed as much self-reliance and readiness of resource, as that performed by the elder Twitchell. In this case, too, the operation was determined beforehand, when the great obstacles had opportunity to discourage the operator, while the other was forced upon the surgeon. Are there many surgeons who would undertake transfusion with a scalpel, a fountain-syringe, and an old-fashioned canula? In view of the complicated and perfect apparatus now used in this operation, it is probable that if the average surgeon had the old canula he would not think of the fountain-syringe, and if he had both would not dream of attempting transfusion with them alone.

This operation showed a heroism which should win for Dr. Twitchell the highest meed of praise. The case was reported in the *New York Medical Record* by Dr. Mason, but in

a very simple manner, the bare facts alone being given. I have seen no allusion to it, and if Dr. Mason had not communicated it to the medical world it is probable that Dr. Twitchell would never have done so, for, like his uncle, he is a man who works for results and not for praise. A simple, genial, brave gentleman. Would there were more physicians like him in the cities as well as in the country!

H. O.

Boston, November 2, 1880.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON FRACTURES AND DISLOCATIONS. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D., Surgeon to Bellevue Hospital, etc. Sixth American Edition, revised and improved. Illustrated by three hundred and fifty-two wood-cuts. 8vo, pp. 909. Philadelphia, Henry C. Lea's Son & Co., 1880.

This excellent and exhaustive treatise, which is so thoroughly appreciated both at home and abroad as to demand no commendation at our hands, has been enlarged by upwards of one hundred pages, and materially improved by the addition of a chapter on general prognosis, and by a revised chapter on fractures of the patella, the latter of which is a *résumé* of a separate brochure on that subject.

In the chapter on general prognosis Dr. Hamilton earnestly combats the extraordinary and pernicious doctrine of Dr. Sayre in regard to the union of fractures of the long bones without shortening, and shows that his statements are based upon erroneous observations of, as a rule, imperfectly-recorded cases in Bellevue Hospital. Indeed, in view of the unequal length of the bones of both extremities,—a fact which has been fully established by Cox, Hunt, Wight, and Morton,—the measurement of limbs is almost valueless. At page 437 Dr. Sayre is placed in a most unpleasant light by the positive denial by the author that he measured the limbs which Dr. Sayre asserted were cured without shortening.

In the chapter on fractures of the patella we are surprised to find that, among the numerous appliances which are described and depicted for their treatment, there is no notice of the apparatus of Agnew, nor of the modifications of Malgaigne's hooks made by Dr. Levis and Dr. Morton, which have been so successfully employed in this city, and through the use of which bony union has certainly been obtained. Among the earlier papers on the subject, with which Dr. Hamilton should have been familiar, reference may be made to one, with an illustration, contributed by Dr. Levis to the *Medical Times*, May 26, 1877, and to another from the pen of Dr. Morton,

which appeared in the *Medical News and Library* for December, 1879. Our own opinion—and we are sustained in it by many of the best surgeons of this city—is that ordinary appliances interfere with the nutrition of the patella to such a degree that fibrous union alone is to be looked for. With the view to obtain bony union nothing could be better than the improved hooks to which we have alluded.

Among other omissions—and they are inexcusable on the part of an author who has devoted the best years of his life to the preparation and the revision of several editions of a practical treatise—the following may be noted: the failure to give credit or even allude to the procedure of the elder Pancoast for securing the fragments of ununited bones by means of a metallic pin or screw,—an operation which he first performed in 1857, and which is fully described in Gross's *Surgery*; no allusion to Professor Bigelow's sub-periosteal resection and wiring the ends of the bone,—a practice which was attended with ten cures out of eleven cases; no mention of Bryant's test-line in the diagnosis of fracture or shortening of the neck of the femur, or of his treatment of fracture of the thigh in children by vertical extension; no reference to the splints of Levis, Gordon, and Coover for fracture of the lower end of the radius; nor any mention of Allis's diagnostic sign of fracture of the neck of the femur, namely, a relaxed condition of the fascia lata between the crest of the ilium and the great trochanter, nor of that gentleman's investigations in regard to the deformity from fractures involving or approximating the elbow-joint.

Among other shortcomings are an inadequate description of the very useful and readily-applied Bavarian bandage, and the illustration at page 479 showing the application of adhesive plaster for making extension in fractures of the femur. Instead of being carried above the knee, the strips terminate below that articulation. Dislocations of the hyoid bone are not described.

In referring, in his preface, to certain omissions in the treatises of Gurlt and Malgaigne, Dr. Hamilton remarks that they are "defects which might have been easily remedied in later editions if the authors had seen fit to do so." For this reason he can scarcely find fault with the reviewer who directs attention to his own omissions, particularly when such criticism is meant to make him more careful in the preparation of future editions.

ON SLIGHT AILMENTS, THEIR NATURE AND TREATMENT. By LIONEL S. BEALE, M.D., F.R.S., etc. Philadelphia, Presley Blakiston, 1880.

"The maintenance of each individual organism in a good state of health, and careful attention on the part of the practitioner to slight ailments, are . . . of far greater importance

practically than the hunting and extermination of various species of hypothetical pathological bacteria, even though it were actually possible to catch and exterminate legions." In such forcible language does the author express his sense of the gravity of his subject.

From beginning to end there is little of the new and precise therapeutics of the day, while the now despised empiricism, or experience with ignorance, whether individual or garnered from past centuries, is extolled on almost every page. Wherever with his microscope, however, the writer can light up and examine, *con amore*, some dark corner, or where he pauses to discourse learnedly upon a flea-bite, the truly scientific person can find much interesting matter.

The author's therapeutics for slight ailments are neither new nor very varied. Old-fashioned purgatives, emetics, acids, and antacids find most favor in his eyes, and, while professing to instruct in the old, fast-fading formulæ, we miss very many remedies sanctioned by experience and antiquity. Almost instinctively in such a work one turns to "Headache" and "Indigestion," as tests of the author's practical value. The ideal treatise on indigestion has yet to be written; we do not find it here, though there is much that is instructive and entertaining. Headache, which is synonymous in his view with biliousness, he considers as a derangement of the digestive organs. If there were perfect digestion and excretion, there would be permanent cure. In impending cases his favorite, mercurial with colocynt, followed by a saline, is recommended, but in its distressing actuality the first remedy given is "to persuade the patient to think as little about it as possible," and go about his business, abstaining from food absolutely. Where the victim refuses to treat the matter so lightly, he must keep warm, soak the feet, sinapism the nape of the neck and pit of the stomach, take lemonade if he craves acids, and drink strong tea, even to five cups. The author is evidently benefited by strong tea in his own attacks. It is refreshing to read (p. 222), "I can assure you that the very confident, unqualified condemnation of mercurials that has lately been so fashionable rests on no foundation of fact. . . . I could give examples of life being prolonged to more than eighty-four, although one or two grains of blue-pill had been taken every fourth or fifth day for forty years." Strong medicine, without blood-letting, however, is recommended freely; the forgotten virtues of black-draught and nitre-balls are extolled. "In these days," he says, "not only do we neglect to use many of the old prescriptions, but we no longer suggest new ones." Now, while the author has not done the former, he has left the latter almost undone, since we have not met, in a careful reading, a single new, original combination.

E. W. W.

SOELBERG WELLS ON THE DISEASES OF THE EYE. Third American Edition, with Copious Additions by CHARLES STEADMAN BULL, A.M., M.D., Surgeon and Pathologist to the New York Eye and Ear Infirmary, Lecturer on Ophthalmology in the Bellevue Hospital Medical College. Philadelphia, Henry C. Lea's Son & Co., 1880.

Since the issue of the first edition of this most estimable work in 1869, it has held its place as one of the leading text-books on ophthalmology in the English language, if not really the leading one. It came out just at the right time. There was nothing for us English people but Mackenzie, a splendid work in itself, but somewhat too antiquated for the times.

Dr. J. Soelberg Wells, F.R.C.S., was an early and attentive student of the leading Continental teachers of ophthalmology, especially of the great, lamented Von Graefe. In his work he lays great stress upon the observations and teachings of that renowned ophthalmologist, and was the first to present his ideas fully to those reading only our language.

Dr. Wells's long connection with the Royal London Ophthalmic Hospital, as well as his position as Professor of Ophthalmology in King's College, London, gave him abundant material for personal observation to bring into his work.

The first edition was soon absorbed, so that it was necessary to issue a second and then a third, which having been sold, a fourth was in preparation, but, his health becoming shattered, he left England for Cannes, in the south of France, hoping that the change to a mild climate would be of benefit to him; but, it being otherwise ordained, he died there in December, 1879, thus preventing the issuing of the fourth edition.

The book being entirely out of print, and the demand for it still continuing, Dr. Bull has taken in hand the editing of an American issue of the last edition, with the necessary additions to bring it up to the present day.

Dr. Bull has done his work quite well and judiciously, by introducing notes embracing almost all of the advances in ophthalmology since the appearance of the last issue. He has also more fully illustrated it than the last English edition.

The typographical errors are not numerous. One, however, it would be well to notice on account of its misleading the student, and that is on page 236, where an effusion of blood in the anterior chamber is called "hyperæmia" instead of "hypæmia," or, as the Continental writers call it, "hyphæmia."

It is true that we have very good translations of foreign works on ophthalmology, some of which are perhaps fuller and more complete in many ways, but none are handier, clearer, and more explicit than this of Wells.

As a text-book it is excellent; but it should be understood by the student and general

practitioner that the study of this book alone does not make a perfect ophthalmologist. There is very much more theoretically and practically to be learned before one is thoroughly capable to diagnose and treat any and every form of disease and affection of the eye, and make all operations on that organ that may come before him. It is intended to give such an insight into that branch of medicine and surgery as shall lead one to further and deeper study, and to prevent the many mishaps that have occurred and may occur in a general practice from want of knowledge of the seriousness of the diseases and affections of the eye, and the necessity of calling in or sending early to the specialist. K.

FRACTURE OF THE PATELLA. A STUDY OF ONE HUNDRED AND TWENTY-SEVEN CASES. By FRANK H. HAMILTON, A.M., M.D., Surgeon to Bellevue Hospital, etc. 8vo, pp. 106. New York, Chas. L. Bermingham & Co.

A careful examination of this book has failed to convince the reviewer of its being a complete monograph on the subject of fracture of the patella. It certainly is a *monograph*, since it treats of only one side of the subject. It is not, however, the elaborate consideration of the injury in question which it was hoped Dr. Hamilton would give us. Much has been done of late in Europe and America to perfect, or at least to endeavor to perfect, the methods of treating this usually unsatisfactorily treated fracture; and yet, we may justly say, nothing of importance has been said of these experimental inquiries. The treatments by hooks, by wiring, and by carbolyzed sutures, which have been so frequently mentioned in the German, English, and American journals, receive no notice,—either because the author has not taken time to bring his work up to the present state of knowledge, or because he does not believe in novelties or revived methods of treatment. In either case the volume is diminished in value, since the profession always looks in monographs for the latest views and most judicious criticism pertaining to the subject discussed. Very nearly three-quarters of the book (73 pages) are occupied by unimportant details of cases,—details which are of little value when accurately given, but absolutely worthless when compiled from hospital records inaccurately kept. The last two chapters, consisting of an analysis of the cases and of some general remarks made on the subject at the clinic of Bellevue Hospital, are really the only portions of the volume that are likely to be read.

Muscular contraction is considered the chief factor in producing transverse fracture of the patella, and undoubtedly the author is correct in his belief, since the experience and observation of all surgeons support this view. The injury is far more frequent in man than in

woman, and in the middle period of life than in childhood or old age, which facts also seem to point to its causation by muscular contraction. The method of treatment preferred by Prof. Hamilton is to elevate the limb, and apply a moulded posterior splint of leather from the middle of the thigh to the ankle. Bandages are then applied from the ankle upwards and from the hip downwards, while the fragments are held together, as well as can be done, by circular turns of the bandage just above and below the bone.

The typographical appearance is good, and it is unfortunate that the volume has not been more carefully compiled and the subject more elaborately discussed, as it would then take a high place in surgical literature, which possesses little in a permanent form on the subject of fracture of the patella. J. B. R.

A MANUAL OF MINOR SURGERY AND BANDAGING. By CHRISTOPHER HEATH, F.R.C.S., Surgeon to University College Hospital, and Holme Professor of Clinical Surgery in University College, London, etc. Sixth Edition, revised and enlarged. Philadelphia, Lindsay & Blakiston, 1880.

The rapidity with which successive editions of this manual have been called for by the profession, both in England and America, is a worthy tribute to the deserved popularity of the distinguished author and the excellence of his work. In the introductory chapter, as in previous editions, the general duties and the conduct of hospital-residents are clearly set forth, a close adherence to which would make the services of resident physicians more profitable to themselves and satisfactory to their chiefs and the managing boards of hospitals. The general and local treatment of hemorrhage and the various methods of resuscitating patients in vogue at the present time are considered with a fulness of detail that the importance of these subjects warrants. A full description of the antiseptic system as practised by its advocates in the treatment of wounds is contained in this edition: the author, however, expresses no opinion in regard to the relative merits of Listerism. Considerable space is likewise devoted to the present popular plan of treating curvatures of the spine by means of plaster-of-Paris jackets, and in connection with this subject our distinguished countryman Professor Sayre receives the credit due him for this valuable contribution to surgical therapeutics. Chapter X. contains a brief account of the splints recently devised by H. O. Thomas, of Liverpool, for the treatment of diseases of the hip- and knee-joints; there is no notice, however, of the important modifications of these splints that have been made at the suggestion of Professor Agnew. The work is illustrated by one hundred and fifteen wood-cuts, the majority of which have appeared in former editions. C. T. H.

DISEASES OF THE PHARYNX, LARYNX, AND TRACHEA. By MORELL MACKENZIE, M.D. 8vo, pp. 440. New York, Wm. Wood & Co., 1880.

This book is a reprint of the first volume of Dr. Mackenzie's "Diseases of the Throat and Nose." No mention being made of the fact that it is an incomplete work, the reader might be deceived into accepting it as a distinct production from the foregoing.

The illustrations are rude copies of the originals, with names of New York cutlers engraved upon them, or, when not so marked, with the name of the English cutler omitted. The scale upon which the drawings are made is not infrequently dropped, and other liberties are taken with the originals. We say the wood-cuts are rude. We can go farther: many of them are caricatures. They are worse than useless, since they mislead. We regret that Dr. Mackenzie should have permitted this mutilated volume to appear. In the event of his not having sanctioned the enterprise, the action of the publishers, in our judgment, is scandalous, and should be rebuked by the profession.

MINOR GYNÆCOLOGICAL OPERATIONS AND APPLIANCES FOR THE USE OF STUDENTS. By J. HALLIDAY CROOM, M.B., M.R.C.P.E., etc. Edinburgh, E. and S. Livingstone, 1879.

Both of these manuals for students will be found very useful, and, from their small size and clear print, would not be useless to practitioners in general as handy books for the pocket, to be perused in the spare minutes. The manual of Dr. Croom is profusely illustrated, and the specula, pessaries, sounds, and sponge-tents are almost life-like. Page 29, however, presents a picture over which the reader may well pause in astonishment, for in it is seen a woman, forlorn, slightly clad, lying on the sands of some desolate shore, and clinging to a rock with both arms. At her side the tide can be seen rising. The text, however, reveals the fact that she is only in the ordinary gynæcological position, lying on a mattress and grasping a pillow. The water is the side of the mattress, while on the opposite page are portrayed a Cusco and a Sims speculum. The romance disappears; the prosaic reasserts itself. E. W. W.

A TREATISE ON FOREIGN BODIES IN SURGICAL PRACTICE. By ALFRED POULET, M.D., Assistant-Surgeon-Major, etc. 2 vols. 8vo, pp. 271 and 321. New York, William Wood & Co., 1880.

These volumes constitute a valuable addition to surgical literature, but the cheap manner of their getting up,—which, we presume, calls for poor paper, trying type, and execrable wood-cuts,—as well as the absence of running heads, save the title of the work, so greatly detracts from its value that we advise our readers to purchase the original.

GLEANINGS FROM EXCHANGES.

TREATMENT OF SPRAINS BY MASSAGE.—Dr. Béranger-Féraud, an old army surgeon, gives an account of four hundred sprains which he treated successfully with massage. He speaks as follows:

I think it necessary to tell in detail how, in my opinion, a person ought to proceed when he undertakes to treat a sprain by massage, for it is by indicating very clearly the manner of proceeding which has succeeded, that those who are beginners are put under the best conditions to obtain a success at the first essay which they may make of the method. Let us suppose that we have a sprain of the foot. After we have arrived beside the wounded,—and note in beginning that the nearer the massage is to the moment of the accident the shorter is the treatment,—we make him sit upon a chair if he is up; we seat ourselves in front of him and make him put his injured foot upon our knees. If, on the contrary, the subject is lying down, it suffices to uncover him, and if need be to unbandage him in order to make a diagnosis. This diagnosis being established,—that is to say, when we have found out that we have to do with a sprain, slight, medium, intense, or complicated,—we proceed to the manipulations. We begin by making on the dorsal face of the foot, going from the root of the toes to the leg, following the direction of the extensor tendons, passes as light as possible with the pulp of the four last fingers, anointed from time to time with some fat body,—olive oil, for example. These frictions, which ought always to be directed from the extremity towards the root of the limb, and never in a contrary direction, are extremely light; they begin quite far above the painful part, and are prolonged as far below. They ought not to be painful; and in the cases in which, in spite of their extreme slightness, the subject finds them too painful, it will be necessary to begin at some other region, leaving the dorsum of the foot to return to it when the sensibility has been a little blunted by the massage.

Little by little the pressure is augmented, and at first the pulp of the four last fingers of both hands, then that of the two thumbs, intervene, according as the contact is less painful for the patient. A few minutes after beginning, in general, one may press very notably on a place which at first could not support the slightest friction without suffering. Soon after it is a veritable friction, quite strong, that we may practise, taking care to have recourse to the fat body to protect the skin of the patient, which would not be slow to become excoriated if it were kneaded dry, and the pulp of the fingers feels a sort of peritendinous œdema which one makes mount upwards little by little above the ankle, as far as the fleshy portion of the extensors of the toes and of the anterior tibial.

According as the contacts are less painful, we cause slight movements to be executed upon the articulations in the neighborhood of those which are injured, and one arrives thus little by little at those in which the sprain has spent most directly its effects. These movements are very gradual; imperceptible at first, they go on little by little increasing, until at the end of the *séance*, which it is necessary to prolong willingly, pain being always very carefully avoided, we cause the part to execute all its physiological movements in their greatest amplitude.

At certain moments we may feel under our fingers substances like small nodosities, more or less voluminous, large as a lentil,—nodosities at first fixed, afterwards movable, of which the patient is conscious, and which give an impression of pain when pressed a little forcibly. It is necessary to pass the fingers with persistence over them, taking care to do so lightly enough not to make the patient suffer; and, moreover, they must be mobilized little by little,—at first chasing them very gently, afterwards as far as the fleshy portions of the extensor muscles of the toe and the tibialis anterior.

At the end of a time which varies from one to five minutes, friction may be applied with greater and greater force, and soon strong pressure provokes no sensible pain. This is the moment to leave this portion of the foot to knead either the more external part or the internal part, by passing then along the border of the foot as far as the malleolus, which is turned in such a manner as to follow either the tract of the peroneal tendons or that of the muscles of the posterior tibial region. We act upon each of these regions, as I have said previously, going from the lightest rubbing to vigorous friction, taking as a guide the impressions made upon the patient, and taking great care not to hurtle against an osseous eminence.

The *séance* ought to continue until all feelings of distress and pain have disappeared. When the operation is once terminated, a retentive apparatus is applied.—*Canadian Journal of Medical Science*; from *L'Union Médical du Canada*.

ATROPIN AS A PREVENTIVE TO THE CARDIO-INHIBITORY EFFECTS OF CHLOROFORM.—Mr. E. A. Schäfer, writing to the *British Medical Journal* (vol. ii., 1880, p. 620), says, speaking of a death from chloroform, during an operation, when injections of atropin had been used, that it is well known that atropin paralyzes the cardiac inhibitory apparatus. Since it is probable that death in these and similar cases results from a stimulation of this apparatus, either directly by the drug, or, it may be, in some instances, in a reflex manner, by the stimulation of abnormally excitable afferent nerves during the actual performance of the operation, there undoubtedly seems good reason for the employ-

ment of atropin. But, clearly, it should always be given immediately before the administration of chloroform, as a *preventive*; for if the heart's action has completely stopped, the circulation having once ceased, of course no cure is possible; and even if the inhibitory action has only much slowed and weakened the heart, without having actually arrested it, the absorption of the atropin would probably be too long delayed to be of any avail.

CASE OF MALFORMATION OF THE HEART.—Dr. Thomas B. Peacock reports (*Lancet*, vol. i., 1880, p. 530) a case of great constriction or stenosis of the orifice of the pulmonary artery; aorta arising from both ventricles; defects in the fold of the foramen ovale; the ductus arteriosus closed. The patient was a child one year and seven months of age, and the signs of malformation of the heart were very marked. The lips, hands, and feet were very livid; the ends of the fingers and toes were clubbed, and the nails incurvated. The cyanosis was probably present from birth, but it first attracted decided attention when the child was nine days old. It had gradually grown more marked from that time. The jugular veins were distended, and there was a systolic murmur heard in the region of the heart. The child was very easily chilled. Its digestion was difficult, and when the food did not agree the breathing became difficult, and there was violent beating of the heart with increased lividity. The child was seen once or twice by Dr. Peacock, and then not for several years until its last illness. This began on August 8 with earache and restlessness, followed by loss of power in the right hand. In the afternoon of the 9th he had violent shaking of the right arm and hand, and the following morning of the right leg also, with twitching of the right side of the face, and the right arm and leg were powerless afterwards. On the evening of the 12th the temperature was 101°; on the 22d he had a general convulsive fit, followed by partial stupor; on the 23d he recovered consciousness and could speak, though he did not articulate distinctly; on the 24th he had a second attack of convulsions, after which he was entirely unconscious, and he gradually sank till he died at 11 P.M. on the same day. He was six years and nine days old at the time of his death.

EPITHELIOMA OF THE RECTUM REMOVED AFTER A NEW PLAN WITHOUT INJURING THE SPHINCTER ANI—RECOVERY.—The following case occurred under the care of Mr. Rouse, at St. George's Hospital, and is reported in the *Lancet* (vol. ii., 1880, p. 540). The patient, who was 64 years of age, showed an epithelioma of the rectum of about six months' growth, situated on the left side of the bowel, about one inch above the anus. The growth was flat, sessile, about the area of half a crown, and limited to the mucous membrane and the submucous tissue. The deeper parts

felt apparently uninvolved. The operation was as follows. A curved incision an inch and a half in length was made, just outside of the external sphincter and parallel to the outline of that muscle. The skin was then dissected upwards and outwards for a short distance, so that the outer circular fibres of the sphincter were exposed. The muscle was then drawn over towards the middle line. By introducing the finger into the rectum the growth was pressed into the external wound, and it was then cut out, together with that part of the wall of the rectum to which it was attached. In this way an opening about the size of half a crown was made through the bowel. After the closure of the skin-wound but a small cavity could be felt, corresponding to the former situation of the growth. The hemorrhage was very slight. Opium was given in order to keep the bowels confined for some days. The recovery was almost uninterrupted. For some few days slight feculent discharge took place from the wound, but after about three weeks this had completely ceased, and the patient then had entire control over the contents of the rectum. As a matter of fact, scarcely any feces escaped, but the suppuration resulting during the granulation and closure of the cavity possessed a fecal odor. When the patient left the hospital, about a month after the operation, the power of the sphincter was perfectly normal. The general symptoms were much relieved.

The advantages of this method of operating are, remarks Mr. Rouse, obvious, and there seems no reason why it should not be applicable to growths of a much larger size. The advantage of preserving the sphincter intact is evident, and this operation might be advantageously substituted for excision of the lower end of the bowel. Instances have been recorded where that operation has not been followed by incontinence of feces; but the operation above detailed is certainly preferable.

PREPARATIONS OF TAR.—Dr. Gérard (*Le Progrès Méd.*, 1880, p. 784) thinks that emulsions of tar are the best preparations of this substance for medical use, both internally and externally. Here the tar is suspended in a state of minute subdivision. The old *eau de goudron*, or tar-water, of the French Codex, was too readily alterable to form a trustworthy and efficacious medicine, and in addition the tar existed in such minute quantity that, although exalted at one time as a panacea, it fell out of use after a while altogether. Meantime, efforts were constantly made to obtain a more concentrated solution of tar. Sometimes these took the form of solutions in alkalies, and at other times of ordinary solutions concentrated. But the addition of an alkali changes the effect of the tar, and the mixture thus made cannot take the place of tar alone, while in the act of maceration or concentration in a water-bath the volatile and

bitter constituents of the tar are lost. In consequence of this difficulty in making satisfactory solutions of tar, M. Leboeuf devised a process by which an emulsion containing the active ingredients of tar could be obtained. The substance used for this purpose is saponin, a perfectly neutral substance, prepared, as is known, from the *quillaya saponaria*. As contained in the tincture of the root, which is used in making the emulsion, not enough saponin can be taken to produce toxic effects. It is not difficult to take, and is comparatively easy of digestion; while the capsules of tar are apt to embarrass digestion and cause headache.

AUTOPSIES IN THE PARISIAN HOSPITALS.—Recent French laws relative to the disposal of the dead appear to bear rather hardly on the interests of scientific medicine. In the first place, interments may not take place until twenty-four hours after decease. This is to prevent burying alive, and is thus far good. But the "ordonnance" concerning autopsies, embalment, etc., goes on to forbid any such operation until twenty-four hours have elapsed after decease. It is also necessary to place before the authorities evidence that the operation, whatever it may be, is authorized by the family. These regulations are said not to be applicable to operations practised in hospitals or legal dissecting-rooms. Further regulations, however, are provided for these. Thus, professors and hospital surgeons may proceed to open a cadaver, but may not dissect it. Hospital physicians, other than the clinical professors, may make autopsies on only one-third of the patients dying under their care. Corpses reclaimed by their families may not be examined. Autopsies may not be made until twenty-four hours have elapsed since death (1). In some cases this law against inhumation before twenty-four hours, if carried out strictly, may do harm, e.g., in persons dying with smallpox; while in cases where autopsy may be desired, a delay of twenty-four hours may cause such alteration in the tissues as to disguise entirely the early post-mortem appearances.

FATTY TUMOR BENEATH THE SCALP.—Mr. Sydney Jones (*Lancet*, vol. ii., 1880, p. 587) reports the case of a boy of 20 months, on whose scalp, at the age of two months, a tumor the size of a marble was noticed. It increased at first slowly, but later rapidly, until, when the child was brought to Mr. Jones, the tumor was the size of half an orange. It occupied the median line, was over the sagittal suture, and extended backwards to the situation of the posterior fontanel. Pressure caused no diminution in size, head-symptoms, or other inconvenience; crying made it tighter and more prominent. The margin was raised, and harder than the rest of the tumor. A small portion of the tumor removed with the grooved needle showed fatty particles under the microscope.

The tumor was transfixed longitudinally and removed. It was adherent in some places to the scalp, and was accurately moulded to the pericranium, from which it was pulled off. The tumor weighed two and a half ounces, and consisted of pure fat. The wound healed without trouble.

LOCOMOTOR ATAXY IN VARIOUS MEMBERS OF THE SAME FAMILY.—At a recent meeting of the Clinical Society of London (*Lancet*, vol. ii., 1880, p. 618), Dr. Gowers brought forward a series of five cases of locomotor ataxy in members of the same family, three of whom were exhibited. The father was healthy, but his brother and two half-cousins were insane. The mother had suffered in early life from cholera. The family consisted of nine children: (1) a son, aged thirty-nine, with well-marked ataxy, which commenced at nineteen. He is just able to walk with crutches. There is incoördination in the arms, with affection of articulation. Sensation to touch is normal, that to pain in the legs is increased. The knee-jerk is lost. (2) A girl, who died of fever at ten years old. (3) A son, aged thirty-five, healthy. (4) A son, aged thirty-three, healthy. (5) A girl, aged twenty-nine, in whom the affection commenced at eighteen. She can now scarcely stand; there is weakness in the legs, as well as ataxy, and also incoördination in the arms. Speech is affected, sensation is normal, the knee-jerk lost. (6) A son, aged twenty-six, perfectly well. (7) A son, aged twenty-three, considerably affected. The disease showed itself at nineteen; he is now scarcely able to walk, with ataxy of both arms and legs, and loss of sensation, absence of knee-jerk, and affection of articulation. (8) A son, aged twenty-two, reported to be well, but found, on examination, to be distinctly affected. Articulation is confluent, there is inability to stand with the eyes shut, absence of knee-jerk, and distinct impairment of sensation on the legs to touch. The arms are at present unaffected. (9) A son, aged nineteen, affected in rather a greater degree than the last, with slight unsteadiness of gait, inability to stand with eyes shut, distinct impairment of sensation to touch, absent knee-jerk, unsteadiness in writing, and confluent articulation. Thus, of eight members of the family who have reached adult life, five are affected. The only causal influence discoverable is the neuropathic heredity. Several similar groups of cases have been reported. It is noticeable that none have suffered from pains in the limbs. There is no affection of the iris or of the optic nerve. In previously reported cases where autopsies have been had, the lesions found have been similar to those of ordinary ataxy.

BLUE SPOTS ON THE SKIN SYMPTOMATIC OF PHTHEIRIASIS PUBIS.—The occasional occurrence of blue, slate-colored, or dark spots on the skin, of a mysterious character, has long

been exercising the minds of our French brethren, who have written long articles to show the exact significance of these mysterious patches and the mode of their production. From an investigation of two hundred and fifty cases in 1878, Moursou found that they were invariably accompanied by crablice. Recently, Dr. Duguet (*La France Méd.*, 1880, p. 610) has produced these blue spots by inoculating various portions of the skin with a paste made of the pediculi ground up with water. The day after inoculation very well marked blue patches, the size of a ten-cent piece, were noticed at each point operated upon. These patches lasted several days, then began to fade, and by the end of ten days had entirely disappeared.

PROGRESS IN THE TREATMENT OF STRICTURE OF THE URETHRA.—Some remarks were made on this subject by Sir H. Thompson, at the annual meeting of the British Medical Association, in Cambridge, August, 1880. As illustrations of this advance during the last thirty years in England, the doctor mentioned five points:

1. A general recognition of the principle that a delicate and gentle manipulation of any instruments in the urethra is alone trustworthy or permissible, in the place of that which was formerly greatly prevalent, viz., that urethral obstruction might often be overcome mainly by force.

2. The substitution of very pliable and taper instruments for silver and stiff gum-elastic instruments in much of the treatment, both in ordinary and in continuous dilatation.

3. A more general acceptance of the doctrine that, given time, patience, and gentle handling, very few strictures should be met with which cannot be fairly and successfully traversed by an instrument passed through them into the bladder. At the same time, an undoubted improvement is to be noted in the mode of operating for those exceptional cases in which the surgeon fails to accomplish that object.

4. A more general acceptance of the doctrine that dilatation of the urethra, whether with or without incision, may be carried with advantage to a somewhat higher degree than had for some time previously been regarded as desirable.

5. The substitution of internal urethrotomy in some form for the application of caustics, and for external urethrotomy on a guide.

Each of the topics named is then considered somewhat in detail. In connection with the subject of the "calibre," or "diameter," of the urethra, or the amount of its dilatability, he refers to Dr. Otis's revival of the theory of "the large diameter of the urethra." He records his sense of the value of this point, but he adds that "it is a very easy thing to damage irreparably some individuals by over-distending the urethra." Thompson also opposes another doctrine which is associated

with the preceding, viz., that stricture of the urethra is permanently cured by complete division of all the diseased tissues affecting the passage. In speaking of the many methods of performing internal urethrotomy, he says that the principles which govern a sound procedure are more essential points for the surgeon to discover and to teach than a consideration of small details. These principles he briefly states as follows. 1. The necessity for a physical examination before operating, to detect and estimate the narrowed portions of the urethra. This is best accomplished, in his opinion, by means of a series of metal bulbs on slender stems, taking care not to regard as changes of disease those points at which the urethra itself is naturally only slightly dilatable. These bulbous exploring sounds he invariably used, advocating them as essential to diagnosis, in his first work, twenty-six years ago. He still prefers them to any others, as safer, less irritating, and not less efficient than more complex instruments which have been devised. 2. The necessity for accomplishing a complete division of all the morbid tissue constituting the stricture, by an incision carried through it, no matter what part of the urethra, or how much of it, is involved in the disease. As a general rule, he thinks, this is most efficiently done by a slender blade, carried beyond the stricture and made to cut from within outward, this latter proviso being, however, an open question. The important point is that any alleviation of the patient's condition attained by operation will be transitory if any part of the narrowing be left undivided. 3. He regards it as essential, after such division, to place at once a full-sized catheter for some hours in the bladder, to insure a free outlet for the urine, and prevent all possibility of extravasation of urine into and through the incisions thus made. 4. The necessity for passing full-sized bougies subsequently, at occasional intervals, in order to effect free distention of the walls of the urethra, which lie in almost constant apposition, and so to prevent reunion of divided surfaces by the first intention. Finally, he declares that the great desideratum of the present time unquestionably is the discovery of a mode of treatment which shall permanently restore to the strictured passage its original dilatability; and he adds that a thoughtful consideration of the pathological condition which constitutes organic stricture does not embolden him to hope that such a result can be insured by the application of any principles of action at present known to us.—*The British Medical Journal*, August 28, 1880; *New York Medical Record*.

CASTRATION FOR HYSTERIA.—Under this title the *Lancet* (vol. ii., 1880, p. 588) gives a curious story of an hysterical patient who had suffered for some years from obstinate vomiting, accompanied by severe ovarian pains. She became extremely weak, and finally con-

sented to spaying as the only hope. The operation, which was performed under chloroform with "antiseptic precautions," was a mockery, the skin only being incised. A perfect cure, however, of all the hysterical symptoms resulted.

ERRORS OF CLINICAL THERMOMETERS.—

It may not be generally known that the clinical thermometers in common use are not to be relied upon within one-half a degree Fahrenheit. Thermometers having a Kew certificate less than six months old are excepted. A thermometer which may be accurate when first made may afterwards change, and new thermometers should be laid aside for two years before they are fully graduated. The error is in an increase of reading; eighteen months may permit a rise of .4° Fahrenheit.

GASTROTOMY.—Dr. Elias reports in the *Deutsche Med. Wochens.* (No. 25, 1880) a very successful case of gastrotomy in a man aged 48, reduced to the last extremity by stricture of the oesophagus. The collapsed stomach was with difficulty found during the gastrotomy; it was fastened to the abdominal wall and opened on the fifth day, when union was complete. Twelve days after the operation the patient was able to go out, and the nutrition of the body rapidly improved.

REMOVAL OF THE ENTIRE SCAPULA.—Mr. Bellamy, of Charing-Cross Hospital, recently removed the scapula for an encephaloid growth involving the whole bone. The hemorrhage was but trifling, owing to the perfect command obtained over the subclavian artery by compression through a primary incision in the integuments. A week after the operation the patient was progressing satisfactorily.—*Lancet*, vol. ii., 1880, p. 588.

TREATMENT OF THE VOMITING OF PREGNANCY BY ETHER SPRAY.—Dr. Lester writes to the *New York Medical Record* giving a case of uncontrollable vomiting, in which, after everything else had been tried, he conceived the idea that freezing the pneumogastric near its origin might possibly control the intensely-irritable stomach. In view of this fact, he at once commenced the process of freezing the nerve in its track, under the sterno-mastoid, on both sides of the neck alternately. The effect was, indeed, remarkable, for decided benefit was observed after the first trial, and during the first twenty-four hours the woman vomited only four times, and in three days the vomiting ceased entirely. This process was performed every two hours the first day, and at much longer intervals during the second and third days, and continued ten minutes at each sitting. The pulse was closely observed.

STATE OF THE GANGLIONIC CENTRES IN BRIGHT'S DISEASE.—Drs. Longstreth and Da Costa, in a paper on this subject in the *American Journal of the Medical Sciences* for July, 1880, conclude as follows:

1. That in Bright's disease, especially in

the contracting kidney, there exists a constant lesion of the renal plexus.

2. That whilst this lesion might be looked upon as forming part of a general process of degeneration, in connection with the kidney disease, we think it is the cause of the renal malady, and precedes the degenerative changes.

3. That the diseased condition of the ganglia furnishes the clue to the alterations of the vessels of the kidneys.

4. That similar changes producing similar results may exist in other ganglia; for instance, in the cardiac plexus, explaining the hypertrophy of the heart.

MISCELLANY.

ACTINOMERIS HELIANTHOIDES.—The root of actinomeris helianthoides is from the size of a quill to that of a knitting-needle, and has an oil and perhaps a resin in it, giving it the taste and somewhat the smell of turpentine. It has long been used by the people of Upper Georgia in dropsy, under the name of diabetes weed. Dr. I. G. M. Goss says that he has used it in several obstinate cases of dropsy and in several cases of chronic cystitis with fine effect; also in calculous affections and in chronic inflammation of the entire urinary tract. He gives it in the form of a tincture, one or two drachms to a dose, as a diuretic, or as an infusion, in doses of one-half to one ounce, repeated every hour or two. It may be tinctured in sweet spirit of nitre, eight to sixteen ounces of nitre.—*New York Medical Journal*.

QUININE-PRODUCTION IN INDIA.—Experiments in acclimatizing the cinchona-tree in India have been entirely successful, and there are now, in various stages of growth, probably millions of cinchona-plants already yielding the Peruvian bark so plentifully and perfectly that the price of quinine has fallen in Ceylon and other parts to about eighty cents an ounce. There appears reason to believe that, sooner or later, quinine may be exported from that country.

CONVERGENT SQUINT.—Dr. C. A. Bucklin (*New York Medical Record*, vol. xviii., Nos. 4 and 16), in an article on the cause, results, and treatment of this deformity, recapitulates as follows:

1. All persons squint who can see by doing so and cannot see without. The degree of their hyperopia or the strength of their internal muscles can be what they may.

2. Every squinting eye that is not due to paralysis of a muscle can be straightened.

3. Never fail to satisfy yourself, before leaving an eye you have tenotomized, that the mobility of the eye is sufficient.

4. The use of one eye is usually lost in convergent squint; consequently its earliest symptoms should receive prompt attention.

RED PERSPIRATION IN THE AXILLÆ.—A correspondent of the *New York Medical Record* of October 30, referring to a case of this sort recently reported in that journal, says that he is himself a subject of the same phenomenon. Although he perspires greatly in summer, the red perspiration occurs only now and then, he thinks, after taking an unusual amount of exercise. He has never known the red perspiration to occur except in summer. The hairs of the axillæ are matted together with a honey-like secretion, which is quite sticky.

THE MARRIAGE AGE IN DIFFERENT COUNTRIES.—Austria, 14 years for both sexes; Germany, the man at 18, the woman at 14; Belgium, the man at 18, the woman at 15; Spain, the man at 14, the woman at 12; France, the man at 18, the woman at 15; Greece, the man at 14, the woman at 12; Hungary, Catholics, the man at 14, the woman at 12; Protestants, the man at 18, the woman at 15; Portugal, the man at 14, the woman at 12; Russia, the man at 18, the woman at 16; Saxony, the man at 18, the woman at 16; Switzerland, the man at 14, the woman at 12; Turkey, at puberty.—*Medical Gazette*.

MORTALITY AMONG MEDICAL MEN.—Hecker confirms by his statistics a fact, indeed, already known, that the duration of life among medical men is notably less than the mean. From Escherich's statistics it results that in Bavaria, of 100 individuals, 53 Protestant pastors, 41 professors, 39 advocates or magistrates, 34 Roman Catholic priests, and only 26 doctors reach the age of fifty.

EUCALYPTUS OIL FOR DRESSINGS.—Dr. Schulz, of Bonn, considers that eucalyptus oil offers many advantages over carbolic acid, without its inconveniences. It is a powerful antiseptic, is freely soluble in alcohol and oil, and mixes well with paraffin; its odor also is agreeable. Dressings prepared with this oil are very antiseptic. It may be employed also for spray and washing.

CHANGES OF COLOR IN SKIN AND HAIR.—Smythe (*Archives of Dermatology*, July, 1880) tells of a man of 47 who had, up to his thirty-fifth year, a fair skin, with light hair and dark eyes. About this time his hair began to turn gray, but the hair which did not turn gray turned to nearly a jet-black; his skin at the same time assumed a dark and bronzed hue.

TREATMENT OF SYPHILITIC NEURALGIA.—M. Mauriac treats the neuralgia symptomatic of syphilis with iodoform pills, according to the following formula:

R Iodoform powder, 1½ grammes;

Extract and powder of gentian, q. s.

Divide into 20 pills, two or three to be taken daily.

The London *Lancet* characterizes London as a town "where flowers cannot be made to grow, where sunlight is a rarity, where all we touch is smutty, and where the very statues

in the streets succumb to the biting acidity of the atmosphere."

DR. EDWARD SEGUIN died in New York October 28, in the 69th year of his age. He was especially famous for his efforts in behalf of idiots, and is said to have founded no less than eleven schools for their treatment and education in the United States.

We are surprised to read in the *New York Medical Record* of October 30 that Dr. Austin Flint, Jr., has declined the Chair of Physiology in the Jefferson Medical College. As no vacancy exists in the said chair, our contemporary must be wool-gathering.

MELOHIAH, a Choctaw princess, died at Hoyt City, in the Indian Territory, the other day, at the great age of 114 years. She had thirteen great-great-grandchildren. She had been addicted to the inordinate use of tobacco for one hundred and five years.

EFFORTS are being made to secure a law in Pennsylvania similar to that in force in New York for the purpose of guarding the inviolability of confessions made to physicians or secrets discovered in the course of medical attendance.

LACTIC ACID IN CHRONIC CATARRH OF THE BLADDER.—Deeke recommends injections of a one-half to one-per-cent. solution of lactic acid in cystitis with ammoniacal urine.

APPROPRIATE.—We notice a paper on post-partum hemorrhage, by Dr. Gore, in the *St. Louis Medical and Surgical Journal* of October 20, 1880.

OFFICIAL LIST

OF CHANGES OF STATIONS AND DUTIES OF OFFICERS OF THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 31 TO NOVEMBER 13, 1880.

KING, WILLIAM S., COLONEL AND SURGEON.—His leave of absence still further extended six months on account of sickness. S. O. 240, A. G. O., November 9, 1880.

MEACHAM, F., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 234, A. G. O., October 30, 1880.

PATZKI, J. H., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Jackson Barracks, La. S. O. 126, Department of the South, October 29, 1880.

HEITZMANN, CHARLES L., CAPTAIN AND ASSISTANT-SURGEON.—The extension of his leave of absence of September 28, 1880, from Headquarters, Division of the Pacific and Department of California, is further extended two months. S. O. 234, c. s., A. G. O.

LAUDERDALE, J. V., CAPTAIN AND ASSISTANT-SURGEON.—Relieved from duty as Post-Surgeon at Newport Barracks, Ky., and assigned to duty at McPherson Barracks, Ga. S. O. 127, Department of the South, November 1, 1880.

WORTHINGTON, J. C., CAPTAIN AND ASSISTANT-SURGEON.—Granted leave of absence for six months. S. O. 241, A. G. O., November 10, 1880.

WOOD, M. W., CAPTAIN AND ASSISTANT-SURGEON.—Assigned to duty at Fort Brady, Mich. S. O. 201, Department of the East, November 12, 1880.

SATTERLEE, RICHARD S., LIEUTENANT-COLONEL AND BREVET BRIGADIER-GENERAL, Chief Medical Purveyor of United States Army (retired).—Died at New York City November 10, 1880.